

VOLUME II JOINT APPENDIX

United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 11247

STATE OF WISCONSIN AND PUBLIC SERVICE COMMISSION
OF WISCONSIN, Petitioners

versus

FEDERAL POWER COMMISSION, Respondent
PHILLIPS PETROLEUM COMPANY ET AL., Intervenor.

No. 11241

CITY OF DETROIT, MICHIGAN, Petitioner,

versus

FEDERAL POWER COMMISSION, Respondent
PHILLIPS PETROLEUM COMPANY ET AL., Intervenor.

No. 11242

CITY OF KANSAS CITY, MISSOURI, Petitioner,

versus

FEDERAL POWER COMMISSION, Respondent
PHILLIPS PETROLEUM COMPANY ET AL., Intervenor.

No. 11245

CITY OF MILWAUKEE, WISCONSIN, a Municipal Corporation, Petitioner,

versus

FEDERAL POWER COMMISSION, Respondent
PHILLIPS PETROLEUM COMPANY ET AL., Intervenor.

No. 11252

COUNTY OF WAYNE, MICHIGAN, Petitioner,

versus

FEDERAL POWER COMMISSION, Respondent
PHILLIPS PETROLEUM COMPANY ET AL., Intervenor.

Review of An Order of the Federal Power Commission

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Review of An Order of the Federal Power Commission

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Testimony—Record Pages 3502-5799

[3502]

JACK K. BAUMEL

was called as a witness, and having been first duly sworn, was examined and testified as follows:

Direct Examination by Mr. Crenshaw

Q. Please state your name. A. Jack K. Baumel.

Q. Where do you live, Mr. Baumel? A. Austin, Texas.

[3503]

Q. What is your business or profession? A. I am a chemical petroleum and natural gas engineer.

Q. For whom do you work or are you employed by anybody? A. I am employed by the Railroad Commission of Texas.

Q. In what capacity? A. As chief engineer.

Q. Before I ask you what the duties of a chief engineer of the Railroad Commission of Texas are, I'll ask you to for the record briefly state for us your background and experience and education in the field of chemical petroleum engineering and so forth. A. I have a B. A. degree in chemical engineering from the University of Texas and graduate work in petroleum engineering and natural gas from the University of Texas, and I have been employed with the Railroad Commission since graduation, which was in 1937, and I have worked with the Railroad Commission since except for one year, a leave of absence which I was granted to be employed with the Venezuelan Government.

Q. During the 13 or 14 years since you have graduated you have been employed constantly with the exception of one year when you went with the Venezuelan Government as a petroleum engineer and as chief engineer for the Railroad Commission, is that correct? A. That is correct. I became chief engineer in 1945 and director of production of the oil and gas division in 1942.

[3504]

Q. During all that time have you had occasion to study with reference to the rules and regulations and the statutes of Texas regarding the conservation of oil and gas in Texas?

A. Yes, sir.

Q. Would you briefly for us relate what are your duties with the Railroad Commission of Texas as chief engineer?

A. My duties is to carry out the administrative orders for the Railroad Commission and enforce the rules and regulations of the Commission, pertaining to the conservation of oil and gas.

Q. Are you an advisor to the Commission in any capacity with reference to engineering, petroleum engineering and problems relating to conservation? A. Yes, sir, I am technical advisor to the Railroad Commission.

* * *

[3569]

Q. What is the next step that the driller of the well, owner of the well, in this case we'll say it is Phillips, what is the next step that they take in regard to that well? A. Well, if they want an allowable on that well to share in the market demand for the Texas-Hugoton field, they must

submit to the Commission a potential test and with that potential test they must file a form 2 or completion report to show that

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that well is a producer.

Q. Then you ask an engineer of the oil and gas division to study that report and determine whether the potentials of that well, in order to set allowables for the well, is that correct? A. In the Texas-Hugoton field, the allocation formula is based on 100 per cent acreage times deliverability, so we require the operators in reality to submit a deliverability test to show the well capable of producing gas into the line at that pipe line pressure, and in this case we would not give them an allowable until they submitted a potential test and a deliverability test showing the well is capable of producing gas.

Q. After they had complied with that test, then would or would not they go about the job of seeking an allowable for the well? A. As soon as we receive the potential test and deliverability test we then issue, if that well happens to come in during the middle of the month, well, then, issue a supplement to that, giving them an allowable based on the total allocation formula for the field, which, in this case, they'd have to first submit to us a unit plat showing that they can circumscribe 640 acres to that well in order to get full credit for the acreage. If this case if they submitted a plat showing 640 acres to the well and a deliverability test, we would then figure their allowable on 640 times deliverability times the

[3571]

factor which we arrive at based upon market demand for that field.

Q. Does that fit in with your formal procedure with reference to promulgating a proration order and allowables with reference to the fields which are depicted here by this Exhibit No. 12? A. That is correct. All connections and wells in this area are subject to that same procedure which I just outlined. Any new well that comes in, they would file a potential test and deliverability test and a plat showing the acreage dedicated to that well. We would then issue a supplement giving them an allowable. The next month we would then put that well on the proration schedule subject to the market demand for the field.

Q. Assuming that is the next month and I believe you stated a while ago that prior to the 20th of each month you have a state-wide hearing, is that correct? A. Under the statute, Section 12 of Article 6008, the Commission has to call a hearing to determine the market demand for gas prior to the 20th of each month, and that market demand is arrived at by each operator submitting nominations to the Commission as to what their demand is from their connections or in the field.

Q. Assuming that is April 1, 1951, I mean you have considered during the month of March 1951 the allowables to be set and prorations to be set in that field.

[3572]

A. That is correct. The Commission after notice and hearing state-wide notice of the hearing, will hear the evidence

and go into it and to the market demand for gas for the whole state by fields. Then the Commission will issue an order giving every field and its market demand for that field. Our job then is to take that order and reallocate that allowable based on the nominations for each field according to the total allocation formula for the field in question.

Q. I'll ask you if you have not with you the allowable order, based on the nominations for the month of April 1951. Do you have that? A. Yes, sir, that is correct.

BY MR. McALLISTER:

Q. For what field? A. That includes the Panhandle, the Hugoton and the state-wide prorated fields.

BY MR. CRENSHAW:

Q. I'll ask you to look at that document and identify what it is. A. This document has two things together. First is that state-wide order which I spoke of where the Commission after notice and hearing called a state-wide hearing and determined the market demand for gas from each field. Then attached to that order is a proration schedule of each field which order allocates the nominations for market demand.

* * *

[3576]

Q. I believe you have already explained, Mr. Baumel, how the Commission, based upon the nominations for each field, then makes a state-wide allowable for all of the fields and then applying the proration allowable formula to each field you have arrived at what each well will be allowed to produce in that particular field, is that correct? A. That

is correct. We are bound by the statute to distribute the allowable to all wells in the field based on the allocation formula whether they have connections or not.

Q. In making that allowable for each particular well, we'll say, as shown here in Exhibit No. 12, state whether or not the Commission is restricted by the laws to do that on a basis which will not discriminate as between the producers in the same field. Is that correct or not? A. That is correct. We have to consider under the statutes the market demand for the field as a whole, not the market demand for each purchaser, and we take and total up the nominations from each purchaser and arrive at the market demand for that field. We then take those nominations and distribute them ratably according to the allocation formula to all wells in the field whether they have connections or not.

Q. Speaking specifically about the nominations in

[3577]

in that regard, I'll ask you to state whether or not that one who makes the nomination will also obtain or receive from the Commission an allowable which is equal to that nomination. A. Well, if he did it would just be a miracle, because it would be impossible for a purchaser to get exactly what he nominates in every day occurrences on the proration when you prorate to distribute the allowable ratably to all wells whether they have connections or not and we must consider the market demand for the field as a whole. The purchaser will in many cases end up with less than what he nominates and in a number of cases he will end up with more than he nominated.

Q. Is that your experience with the Railroad Commission in setting the allowables for these fields, has that been the picture as you described it there or not? A. I might explain this, that when we first put a field on proration, the only way we can arrive at as to what the actual market demand for the field is would be based on the sworn nominations, but we have experienced over a number of years and based on human nature, that a purchaser will always over nominate so he can get the gas from his own connections. That will hold true for the first month but on the second month we take the actual gas from the field and disregard his nominations for the following month.

[3578]

For example, the total nomination for the field may be three million cubic feet a day. We would fix the allowable for the first month at three million cubic feet for the field and distribute it ratably for all wells whether they have connections or not based on the allocation formula. When we receive the producer's reports or 3-266, we check the production figures against the allowable schedule and if we find that instead of taking three million from the field they actually took two million five hundred thousand cubic feet, then the following month when we fix our proration schedules and the nominations are still three million we automatically reduce them to two million five hundred thousand because we feel that is the actual demand for the field and we distribute the actual take ratably to all wells whether they have connections or not.

Q. That is exercising your jurisdiction and control over

the wells and under our illustration in carrying it forward under this exhibit, that is the exact procedure that applies to the wells shown in the exhibit, is that true? A. The same procedure applies to any field which is under proration in the State of Texas.

Q. In other words, to be more specific, if Phillips has made nomination for its take from this field of the three hundred million as you illustrated a while ago, and it developed on the record that the actual take one month was only two

[3579]

million five hundred thousand, then the following month you would allocate to Phillips, two million five hundred thousand, is that correct? A. We wouldn't exactly allocate to Phillips. We would allocate that to the whole field and that field may have more than one purchaser and it may have more than one number of connections, we would distribute the take from that field, which under the example of two million five hundred thousand cubic feet, it would be on all wells whether they have connections or not, and if Phillips was one of the purchasers and they nominated half that amount and they couldn't get gas they would have to lay lines to those unconnected wells to meet their market demand.

[3580]

Q. All right. Having made your allowable—let's see, I believe Exhibit 134-A is actually the proration allowables that you promulgated for that particular field shown on Exhibit 12, is that right? A. That is correct. That is the

allowable schedule that was issued effective April 1, 1951, which shows the monthly nominations, the amount of production, the acres and deliverability for the field and the net allocation monthly, and the number of connected allowables in the field. It shows that there are three purchasers in the field.

* * *

[3591]

W. J. MURRAY, JR.

was called as a witness, and having been first duly sworn, was examined and testified as follows:

Direct Examination by Mr. Crenshaw

Q. Please state your name. A. W. J. Murray, Jr.

Q. Where do you live, Mr. Muray? A. Austin, Texas.

Q. What is your business or profession or will you state whether or not you hold an office in the State of Texas?

A. My profession is engineering, and I currently hold the office of Railroad Commissioner of Texas. I am one of the three Railroad Commissioners.

Q. I believe it has already been explained yesterday by General Thompson that is an elective office. That is right, isn't it? A. Yes.

Q. And you were duly elected at the last time required for

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your office? A. I was elected. Last summer I succeeded in acquiring the Democratic nomination. I made the mis-

take of saying I was elected last summer. I was elected last November.

Q. So this is the first year of your new six year term?
A. That is correct.

Q. Had you been elected prior to that? A. I came on by appointment.

Q. When was that? A. In January of '47. I took the late Governor Buford Jester's place on the Railroad Commission. When he became Governor he vacated his position on the Railroad Commission and I served in his stead. I served under appointment for two year and ran for office for the last two years of his unexpired term and then last summer ran for a full six year term. I served four years in January of this year, beginning on the six year term.

Q. You have stated that you are an engineer by profession. I'll ask you to state briefly your educational background and experience as an engineer? A. I hold a degree as a B. S. and M. S. in petroleum engineering. I have lived all my life in the oil fields, my father being a rig contractor, and since receiving my educational training, I have worked in the oil fields, serving as consulting engineer and in times past have been employed by the Texas

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Railroad Commission in their oil and gas divisions as an engineer. Does that suffice?

Q. Yes, sir. Would you briefly state for us the duties of your office as Railroad Commissioner, I mean briefly, as you understand your own duties in connection with that office? A. The Railroad Commission regulates all public

transportation in Texas. To outline those duties would be difficult briefly. I think I can just let it suffice to say we regulate all public transportation. We regulate, through our gas utilities division, intrastate movement and domestic sales of natural gas. We regulate the L.P.G. liquefied petroleum gas division or butane division, and we regulate oil and gas, that originally being a correlative minor subdivision of the functions of the Commission, due to the growth of oil and gas industry in Texas it is now our major field of activity.

Q. With specific reference to the regulation of the oil and gas industry in Texas, I'll ask you to briefly state, generally, what phases of the oil and gas industry in Texas do you regulate. I'll ask specifically you regulate— A. (Interrupting.) I'd say all, I guess.

Q. As it is produced within the boundaries of Texas, is that correct? A. Yes. Our primary function is conservation. That is the greatest duty of the Railroad Commission in its regulation of the oil and gas industry. There are many other duties but

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that always comes first and foremost. We regulate the drilling of wells, prescribe many safety and conservation measures relative to drilling. We regulate the spacing of wells and when wells are dry we regulate their abandonment so as to cause no contamination of water horizons or oil or gas bearing horizons. Producing wells, we regulate the method of completion, we regulate the method of production, so that will be produced efficiently and we prorate

or allocate the quantity of oil or gas which each well is permitted to produce. That first duty in proration is to fix allowables, as we call them, at rates which will not cause physical waste, and then since prevention of physical waste necessitates proration, restriction of the rate of production from each well, then we must distribute allowables among all of the wells in a field in an equitable fashion so as to preserve correlative property rights. In brief, the primary function is conservation. Conservation necessarily imposes upon the privacy of the individual to produce his well at the rate he would like. Therefore, when we restrict rates of production, distribute allowables, we take on the secondary function of preserving equity and protecting correlative rights.

Q. One of the primary bases, is it not, in a conservation program is always the matter of preventing waste, is that correct? A. Yes.

Q. Just state briefly, if you will, your idea of what

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it means to prevent waste, or in order to do that you might give us an example of what you mean by preventing waste in a gas field or with reference to a gas well. Is that too general for you? A. No. I'm just taking three breaths to try and be sure I do state briefly. That is my field of specialty. I was trained as a petroleum engineer. I have specialized in the field of oil and gas conservation. I was chairman of the industry committee, I was not then connected with the Railroad Commission, that made a report on the wasteage of gas in Texas, and that, so Governor

Jester stated, was the reason for appointing me on the Railroad Commission, and I am so steeped in the subject that the temptation generally exists to dwell longer on conservation than I should. Now, you have asked for a brief example of how to prevent waste of gas?

Q. Before you start I don't mean to confine you in any way you'd like to explain. If you have anything further to say don't let my statement as to the briefness interfere with your statement. Just go right ahead in answer to that question. A. Well, I am so steeped in the subject of conservation, I think it is so tremendously important to the welfare of the state and of the nation, I think every citizen of Texas and every citizen of the United States has a vital interest in what we do in oil and gas conservation in Texas, and, therefore, it is pretty advisable to limit me and cut me off, that I don't

[3596]

get strung out here. Let me see if I can satisfy your question and do a brief job here. There have been two fields of wastage of gas, first, from gas wells and secondly of casing-head gas. Now, I presume it is not necessary for me to define a gas well and what casing-head gas is. I guess that is in the record or everyone knows that.

Q. In that connection, in view of an objection that was made this morning with reference to an exhibit pertaining to oil production, I would, if you don't mind, like for you to explain what the casing-head gas is and how it is produced. A. Casing-head gas is gas that is produced in connection with the production of oil. It is impossible to

produce oil without producing gas. We have a statutory definition in Texas of what an oil well is and what a gas well is. If the gas-oil ratio is less than one hundred thousand cubic feet of gas per barrel of oil, then by statutes it is an oil well. If the well produces more than one hundred thousand cubic feet of gas per barrel of oil, then by statutes it is a gas well.

With that background, I think I can quickly discuss the conservation problems. In times past there has been a great deal of wasteage of natural gas and when I saw natural gas I am speaking of gas that is produced from a statutory gas well. We struggled to minimize and finally to eliminate the wasteage of natural gas. We now have a statute in Texas prohibiting the flaring of natural gas. One time in the past there was

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flared from the Panhandle field alone as much as a billion cubic feet of natural gas a day. That was a terrific waste. It wasn't willful. There were many causes of it I could explain, but I think it unnecessary. But gradually we have substantially eliminated the wasteage of gas from gas wells.

Then there existed the second problem of conserving this by-product gas that was produced with oil. For a long time it was argued that that wasn't waste, that since it was impossible to produce oil without producing gas and since oil wells were scattered all over the state frequently remote from markets, that you couldn't regard as waste the flaring of casing-head gas, because there was no way of getting the oil which we had to have without getting

the gas, too. But we felt that that gas was of great intrinsic value, too. Casing-head gas, chemically, physically, is no different from natural gas produced from a statutory gas well, and we felt it ought to be used too, that it meant too much to the future of our state and to the welfare of the nation to let that gas be wasted, and so we have long struggled with the problem of getting that casing-head gas marketed.

Briefly, the difficulty lies in the fact that every oil well produces gas. Usually in small quantities. So to market that gas you've got to have an extensive gathering system going to all of these oil wells. You have to have separation equipment separating the oil from the gas and then you have to

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gather that gas, you have to process it, compress it and deliver it to markets.

A gas well can be closed in until its gas is needed and then when there is a period of peak demand for gas, you open up the gas well and produce whatever gas is needed for the market. When the demand falls off, you restrict the well or close it in completely. The problem of casing-head gas, however, is that that gas is produced when you produce oil, and we need oil constantly every day in the year, so that gas must be marketed on a 24-hour basis 30 days a month every day in the year, and it has been an extremely complex difficulty, expensive problem to solve, and I am most happy to say that we have made amazing progress in the utilizing casing-head gas in Texas.

Today we are utilizing approximately three billion cubic feet a day of casing-head gas. In times past, nearly all of that casing-head gas was flared, because it was produced, as I said, so far removed from markets, had to be produced along with the oil. That wasn't as short as I intended it to be, but that, then, in general is the problem of gas conservation. Don't flare any gas from a gas well. Drill and complete and produce them in such fashion as to do no harm to the reservoir and because no waste, and, secondly, market the casing-head gas, give it preference, take casing-head gas first, because you can leave gas well gas in the ground and get it later, but if you don't utilize all of the casing-head gas that is produced

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today it is flared and is gone forever, and so then you begin to—here is a fellow who owns a gas well, he has a market for his gas and he would like to produce it currently, but if we let him fill that market, we may have to turn around and flare casing-head gas, so we have to hold him back and let the casing-head gas have preference in going to the market.

That by no means covers the field, but possibly—I am sorry I haven't been more brief and more responsive to your question, but that, I do believe, gives a proper picture of gas conservation.

[3600]

Q. With special reference to casing-head gas, your explanation there has been the reason why they say the first call is casing-head gas? A. Yes.

Q. Those are the reasons for that? A. That is right. We recognize that there is a serious question of equity. A fellow has an investment in gas wells and wants to produce them. Why shouldn't we let him fill his market? We have to infringe considerably upon his freedom there, but if we don't hold back on those gas wells, we are going to have to let this casing-head gas go to the air and be flared, and we feel that the public has too great an interest even though we do have to take drastic steps, coercive steps, possibly, in forcing markets to be shared and forcing them to give preference to the casing-head gas. The alternative is to continue the flaring of billions of feet of casing-head gas while we use up our natural gas reserves. Then when the natural gas is gone and there would be a market for the casing head gas, it is gone, too, because you have to produce that with the oil.

Q. Let's talk for a minute about the production of oil and in the production of oil there is this inevitable production of casing-head gas also. Perhaps we could go down geologically speaking and describe the strata where there is a field in which there is a gas drive. Would you do that for us, briefly, explain what they mean by a gas

[3601]

drive? A. An oil field where there is a gas drive?

Q. Yes. A. Oil is produced from reservoir rocks. There is a common misconception that oil lies in underground lakes or pools, that when you drill a well down to one of these lakes or pools you produce oil from it as you would from a surface tank of water, until it is empty. That isn't

true. It is held in the tight pore spaces of hard reservoir limestone or sandstone. Oil is like water in a spring, it cannot of itself expel itself, you have to have some source of energy to force the oil out of the pore spaces into the bore hole. We therefore classify oil reservoirs according to the source of energy that moves the oil out of the pore space into the bore hole so it may be recovered, and those sources of energy result in these classifications of oil reservoirs. The most efficient source of energy is water under hydrostatic head pressure, so you produce oil, water moves through the pore spaces flushing the oil ahead of it. That is the field known as one with a water drive, the great East Texas field is an example of a water drive field.

Some fields are sealed off along the outer periphery and have no water that can come in, but they may have an overlying gas gap. In other words, the oil and gas are

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gravitationally segregated. The oil being heavy lies in the bottom of the rock. The gas is lighter and lies in what is called a gas cap or dome above the oil, and that type of field is known as a gas drive field. You recover your oil by the expanding energy of the gas pushing downward on the oil. It is like the compressed energy of a spring. If anyone would understand the illustration, it is like getting water out of a seltzer bottle, the compressed gas above forces the oil to flow out.

I might digress to state to the Examiner my appreciation for being privileged to come in out of order in order that I may return, and also explain that I had no oppor-

tunity to discuss with counsel and so I am not certain that I am completely responsive to the points he wishes to make. Did I answer the question of gas drive?

Q. Yes, you did, and at the same time you mentioned what a water drive field was, too, and that was my other question, the next question. In other words, if you have a water drive field you find the water on the bottom, is that right? A. On the bottom or the edge.

Q. Pushing on the sides or on the bottom? A. That is right.

Q. And the exact opposite of that is true if it is a gas drive, it pushes from the top?

[3603]

A. Gas pushes down.

Q. In the production of the oil to produce the gas—you said that was casing-head gas. How do you regulate the use of casing-head gas? A. Could I generalize a bit more and then be directly responsive to your question?

Possibly by making a few statements I can save time, if it is not out of order.

Q. It is all right. A. There is one other type of drive, what is known as a solution drive. We have water drive fields, we have gas cap fields, extending down and called gas drive, and the other is where you neither have a water drive nor a gas cap. The only energy you have for recovering the oil is gas that is dissolved in the oil. It is like the carbon dioxide in a coke, you punch a hole in the coke and shake it up and punch some of the coke out by the energy of the carbon dioxide in the coke. Unfortunately

you have a lot of fields that that is all you have. The recoveries you get from solution drive oil fields are in the range of fifteen to thirty per cent. The recoveries you can expect from a gas cap drive field are in the range of thirty to fifty per cent, and the recoveries you can expect from a water drive field are in the range of fifty to eighty per cent. Therefore, you see the advantage of having a water drive field. A further complexity exists

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that many fields have a combination of these, and it is the rate of production that determines which drive is used. If you have a water drive it usually will move in only at a certain rate, and you must produce your oil slowly enough to let the water keep up with it. Otherwise you will change from an efficient water drive field to a much less efficient solution drive field.

So remembering that solution drives you get fifteen to thirty per cent, if you have a water drive and will control the reservoir so as to take advantage of it you can run it up to fifty to eighty per cent. You can see the tremendous advantage. Now, I can answer your question of why do we control casing-head gas production. You see, that casing-head gas frequently is the source of energy that moves the oil into the bore hole, and in addition to that dissolved in the oil it makes it less viscous, more free to move. Oil devoid of all of its dissolved gas becomes viscous, tarry, and you just can't get it out of the reservoir, but if you keep that gas dissolved in it, it is fluid, about the viscosity of water, and you can recover it much more readily.

So it is important to control the production of casing-head gas from oil reservoir for these reasons: 1, that gas is frequently the principle source of energy that is going to produce the oil and when the gas is gone, no matter how much oil you have left, you are through recovering the oil.

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That is one reason for controlling it. 2, that gas is you can keep the pressures up and keep it dissolved in the oil, makes the oil much more fluid or more easily recovered. 3, the gas has value itself and so you don't want to waste that gas after it has served its primary function of bringing the oil into the well bore. We still find it of immense intrinsic value and want to conserve it.

We prescribe what is known as gas-oil ratio limitations on all wells and say, now, you can't produce your well with more than a certain gas-oil ratio. That is commonly two thousand to one state-wide, although we recently had a hearing that have nearly changed it to one thousand to one, that is, the state-wide permitted ratio would be one thousand cubic feet of gas per barrel of oil. Wells with high ratios are penalized. They are not given as much allowable oil production as a low ratio efficient well would receive, and that control on gas-oil ratio is one of our biggest functions. We are trying to save that gas in the ground in order to recover more oil and then once the gas is produced we are trying to see that it is marketed.

I might further add, if I am not out of order, because you haven't asked the question,—

Q. (Interrupting.) Go right head. A. To increase oil recoveries we frequently have to supplement natural sources of energy. If you have a solution

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drive field with a fifteen per cent recovery, why, you see how important it would be to do something to artificially inject energy into that reservoir by pumping some fluid in, to get more oil recovery, and, therefore, frequently we have to order gas returned to the reservoir.

[3607]

Why would I consider that worthy of mention here? Well, we are just on the threshold of tremendous steps forward in oil conservation, and I think more and more the commission will come to order oil fields produced in that fashion destined to give the greatest ultimate recovery, and we, therefore, will frequently have to order that casing-head gas which is committed to a market, there is nothing wrong with producing that gas and taking it to the market, except that that gas is needed to get the greatest oil recovery. Wherein we do our duty to the nation and to the state of the greatest oil conservation, we are going to have to more and more encroach upon the privileges of a pipe line to take gas from sources that they may have contracted for 20 years. For example, much of West Texas, that casing-head gas is being gathered and sweetened and taken—El Paso Natural is the biggest producer there. We are getting dreadfully low recovery in West Texas. Less than one barrel out of every five is being recovered. The

two largest oil fields in this hemisphere are currently being developed in West Texas, the Reef Line production and the Sprayberry Sand Production. We are going to get one barrel out of seven or less, and to do something about that as desperately as the nation needs that oil, we are on the threshold of ordering gas returned and we are going to have to step in and take over a lot of that gas that is committed to other sources, but if we are going to get that oil out, we are going to have to use that

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gas to pump that gas out. I have deviated from your question, and I recognize I should be more responsive to direct questions, but that gives me a chance—

Q. (Interrupting.) I want to ask one there. A. I believe he wanted to—

BY MR. McALLISTER:

Q. (Interrupting.) When you said El Paso was one of the larger producers, you meant carriers? A. Carriers, excuse me. To my knowledge they don't produce any gas. That was simply a slip of the tongue.

Q. I thought so and I thought you'd rather have it corrected than come back afterwards and correct it on the record. A. I appreciate that very much.

BY MR. CRENSHAW:

Q. In other words, Mr. Murray, based upon your previous testimony there with reference to the positive conservation to prevent waste as you defined it there, you have related, interrelated, the production of casing-head gas so that it shows vividly that it is necessary to supplement

and maintain the pressures and so forth to produce oil, that you must use that casing-head gas in that production and that as time goes on and the pressures decrease within the reservoir, it may become necessary to use casing-head gas, divert it back into the ground in order to produce and maintain those pressures, is that the way I understand you?

[3609]

A. Yes; except I couldn't quite agree with "may". We know it is necessary, it is now becoming necessary to use casing-head gas and in order to discharge our responsibility of getting the greatest oil recovery, we are going to have to issue orders of much wider scope than we would like to do. Our reservoir is a unit, and therefore we have to deprive a lot of individuals of the freedom of enterprise and freedom of initiative we would like them to have in order not to cause great loss of recoverable order, and it is a thing we shudder about, saying to a fellow, how, I want to sell my gas to this interstate pipe line, it is going for a good use, and we have to tell him no you can't do it, this gas has to be pumped back into this oil reservoir. We shudder to do that, but the alternative is to lose five or six barrels of oil for each one recovered under the ground and oil has become too critical to the nation for us to fail to do full duty in requiring these conservation measures.

MR. McALLISTER: Might I ask a question, please.

MR. CRENSHAW: Yes, go ahead, if you desire.

BY MR. McALLISTER:

Q. As I understood your statement, I think Mr. Crenshaw limited it some, you don't propose to wait until there is that loss made effective by reduced pressure in the reser-

voir, but you propose to do something about it before the loss becomes irretrievable by reduced pressure?

[3610]

A. That is correct, sir. We used to have the thought, the industry generally, that we will go ahead and produce your field by primary methods and then when you got all the oil you can get by primary methods, then if it appears worthwhile we'll go back in and repressure or water flood, we call that secondary recovery, you got all you could primarily—well, you can get a whole lot more. Excuse me, a lot of fields you got down to the point and it wasn't sound to do anything more so you just abandoned them, and those fields where it was wise to have repressuring or water flooding, why, they'd do it, but in every case you could have gotten more oil cheaper if you had done it to start with than to wait until the last. In some cases, you can't do it at the last at all. In other words cases, you can do it fine at the last. But any time you are doing well at the last it is axiomatic you could have done better at the beginning.

Q. Will you explain for the record here just what is that takes place down in the reservoir so far as the viscosity of the oil is concerned where the pressure is reduced under the primary recovery method and which it is impossible later on to rectify by the introduction of gas pressure or what-not. Do you understand the question? A. I believe I do.

Q. I mean a certain amount of that oil that, let's call it, coagulates, for a general term and adheres to the particles

[3611]

of sand and becomes tar like, that is the oil you can never recover? A. We would be challenged if we would say it is lost forever, because you could by pumping gas back in and restoring it to its original pressure, in time it would go back into solution in the oil and the oil viscosity would be reduced.

Q. But you say in time— A. (Interrupting.) Sometimes that would very nearly be geologic time.

Q. That is right. A. So I cannot quite say it is forever lost, but I can say that the process is frequently too slow to be practical for humans to wait on it, and it is generally a lot more expensive, so why not do it right the first time to be sure of it.

Q. But you don't know of any fields where gas has gone back in and they have been able to wait long enough for that oil to return to full solution? A. No, sir. I do want to state that a great deal of good is done by injecting gas into old fields or water into them. I think everybody here is acquainted with what they have done at Bradford, Pennsylvania. They have got even more oil out by water flooding than they ever did by primary methods. I am enthused about those possibilities and want to see if we can't do something like that on every old field. But now that we know

[3612]

better let's try to do the new fields in the beginning, if for no other reason than to save money.

Q. Take the Bradford field you mentioned, that is small compared to the fields you have to deal with in Texas? A. That is right.

Q. I mean the amount of gas—there are some fields in Texas where it would be impossible to find enough gas hardly to bring them back for repressuring? A. That is true.

* * *

[3617]

Q. Just one more element in connection with the recovery of oil. Is it not a fact that the chemical constituents of different characters of oil are such that in dealing with them in different reservoirs, those are matters which have to be taken into consideration as well as those matters which you have mentioned? A. Oh, very definitely, sir. Each reservoir is diverent. I have generalized dangerously in giving these general recoveries, because you must study each reservoir. I might point out one additional thing. The newest technique on oil recovery, one of the newest, I should say, is what is called, or I may call, high pressure gas injection. By pumping gas into an oil reservoir to where you raise the pressure. When we repressure an old abandoned field we don't even raise the pressure back to original, we just build up the pressure to fifty, a hundred

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or two hundred pounds maybe, and in some fields we have what is called pressure maintenance, we pump gas in to keep it up to its original pressure, but the newest idea—it is more than an idea, it has been tested—is to build the pressure up as high as the reservoir rock will stand without parting, and the laboratory research results indicated we can get better than eighty per cent recovery by this high

pressure gas injection on a reservoir that would ordinarily give only fifteen per cent recovery, and it will soon be tried out in West Texas field, this high pressure gas injection.

MR. SPARKS: What field is that?

THE WITNESS: Block 31.

BY MR. McALLISTER.

Q. That is pressure up around twenty-five hundred pounds, something on that order. A. That pressure will vary with the individual reservoir. In general, it is related to depth, and they know they can go up to about a half a pound for a foot of depth. If your reservoir is five thousand feet deep, why, you could go at least to twenty-five hundred pounds and possibly something higher than that. When you get above a pound per foot of depth, you nearly always lift the old burden or part the formation, we don't know exactly what takes place, but instead of the gas going through the pore spaces in the rock, it breaks the rock

[3619]

down and by-passes it.

Q. And so it is lost? A. But that is the most promising new technique, this high pressure gas injection. When you go so very high you dissolve most of the residuals you were talking about, they dissolve in the gas. We have been talking about gas dissolving into oil, and the oil this time dissolves into gas and you get more out of it that way than any other way. The disadvantage, it is expensive. Think of the compressor cost, and it takes a dickens of a lot of gas, we've got to have a lot of gas for that process, but the advantages, think how much additional recovery

we get and we don't waste any of that gas, it will be available at sometime in the future. We just have to take it away from the pipe lines right now but they are liable to need it more in the future.

Thank all of you for your tolerance of me. I'll try to be a more responsive witness.

[3620]

BY MR. CRENSHAW:

Q. In connection with what you are talking about now, state whether or not it is true that the Commission has issued an order concerning the construction of pilot plants in the Scurry field, in order to inject the gas? A. Yes, we have pilot plants there, both for water injection and gas injection. Possibly for the record, I should explain a pilot plant is a small scale reservoir test, rather than trying it for the whole reservoir you just try it for the small area and see how it is going to work.

Q. Awhile ago you were talking about, you mentioned, the gas-oil ratio, and how that applied to state-wide and particularly to some fields. Will you state whether or not there has been any recent order of the Commission with relationship to that gas-oil ratio, we will say, in the Shafter Lake field. Was it gas-oil or was it water? A. I think I know the facts, but I'm not sure. I may have forgotten something. I think I know what you are driving about. In the Shafter Lake-Devonian field, the Commission has issued an order, effective June 1, requiring them to return all of the gas they produced and all of the water they produced to the reservoir. That is a case like we were talking about. We were getting pityful small recovery, pressures

were just dropping, and so we have ordered that all the gas and all of the water be returned.

[3621]

BY MR. SPARKS:

Q. Is that gas connected with Phillips Fullerton plant, if you know? A. Yes. Is it permissible for me to occasionally be prompted by my engineer to be sure I get accurate facts. I know in the court it might not be all right.

* * *

THE WITNESS: I am confirmed in that. That gas produced in the Shafter Lake field goes to the Phillips Fullerton plant and thence after being processed and sweetened is compressed and delivered to the El Paso Natural Pipe Line moving into

[3622]

interstate commerce.

BY MR. McALLISTER:

But if your order becomes effective, will part of that gas go back in the ground? A. If our order is complied with and sustained if we go to court, it will all go back in the ground, so even though the operators in Shafter Lake may have contracted that gas to Phillips and Phillips in turn has contracted it to El Paso, we think the public interest in getting the most oil recovery supersedes there and we are going to make them put that gas in, we are going to try and make them.

Q. Maybe I shouldn't ask you this question now, but you haven't any reason to believe that the Federal Power Commission doesn't fully agree with your conclusions in

that regard? A. We surely haven't, because—I'm digressing again.

BY MR. SPARKS:

Q. (Interrupting.) Have you ever inquired with the Federal Power Commission as to whether they agreed with your conclusions in that regard? A. No, we haven't.

Q. Then you don't know whether they agree or disagree, do you, Mr. Murray? A. No; but it would be so much in the public interest and our presumption is that the Federal Power Commission, as is the Railroad Commission, is primarily concerned with the public

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interest, and we would assume—now, that may be a dangerous assumption and I haven't followed the Federal Power Commission's orders, I'm not as acquainted as I should be with the various statements of policy that have been made, but if in fact it is going to be definitely in the public interest to take the gas and use it in this fashion, it is difficult for me to conceive of our authority, and we feel that that is primarily a field of state authority, to regulate our natural resources so as to get the greatest recovery in turn for the public benefit, it is inconceivable to us that we would be interfered with, but that may be an erroneous assumption.

* * *

[3628]

Examination by Mr. McAllister

Q. Do you have authority by order of the Commission to direct the return of gas to a particular reservoir which

was not produced from that reservoir? His question implies that and I want to get that straight first. I mean could you take all of the gas that is now going into the El Paso line, let's say, and if you needed that total volume coming from, let's say, a half a dozen reservoirs, could you take and order all that gas put back into one reservoir? A. I don't know, and if I could briefly elaborate, I guess all of you realize I am an engineer and not qualified to

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pass on the law, but I have watched it a bit, but there has been difference of opinion among very able counsel as to the authority of the Railroad Commission. For example, the Railroad Commission issue at one time 17 so-called shut-down orders on fields that were flaring large quantities of casing-head gas, and we told them, now, stop producing oil until you can utilize that gas. Well, all of those orders were attacked in court and counsel, I am certain, have sincerely and ably concluded that we didn't have that authority, and we recognize that it was an important test case and we didn't know whether we had authority or not, and the lower courts granted injunctions against us putting those into effect, but the Supreme Court upheld our authority and seemingly stated that if our facts were good enough, if it was truly in the interest of conservation, if it were sound and practical, then the implied authority given us by the constitution and the statutes to protect and preserve the states natural gas sources gave us the authority to do that.

Q. When I asked the question I don't have any opinion

one way or the other, but I do know there is a difference of opinion. A. I don't mean to evade, but frankly we are going to find out. If we have the authority to require an oil field to be shut in, that is pretty drastic. I don't mean to say that it wasn't reasonable that they would rise up and attack that authority. That is a pretty strong measure. You can make lots

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of arguments about why we shouldn't have that authority. We debated long and worried a lot and waited a good many years before we took that step, but if we had the authority to shut an oil well down that might be producing as little as 300 cubic feet of gas per barrel of oil, with a barrel of oil worth two and a half or more, and you set the price on 300 cubic feet of gas, two cents, three cents, why, it looked to some like the tail was wagging the dog, but we were sustained in that and now everybody is happy about it, because the gas is being utilized, oil is being produced and we are doing it at a reasonable price, we understand, or trust they will.

So if we have that authority, I feel that without any knowledge of law that the courts will sustain us if we are reasonable and careful to get plenty of facts in ordering gas to be returned to a reservoir when we are leaving many, many times as much oil as we get out. It is so much more economically important to get that additional oil than it was to save that gas, that I feel we can be sustained there. There is one difference. Oil is underground and it is hard to see. Most people not acquainted with the oil

business don't understand it. But gas flaring in the air was something that the newspapers, radio and public opinion and the courts could see and understand, but I believe in time if we pick our case right we will be sustained if we don't be arbitrary and just go out and show them we have the authority and try to cooperate as much as

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possible. A lot of this will be done—I told you about 17 shut down orders. There many, many fields where we never did issue an order. In fact, as soon as we were sustained in court, we had to threaten—we moved right along. A lot of this will be done without the Commission having to issue an order, and that is the way we like it, but I do believe if there is no other way of getting the gas but to require it from some other field, and if we are clear enough in showing you have to put that gas in to get the oil out, that the courts will sustain our authority to do so, but in honesty I've got to say to you that there is presently no clear definite court decision upholding us in that.

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Q. I appreciate that. You are not taking too much time, as far as I am concerned, because it is very helpful. I wanted to ask you one question now. I'm not sure on all my facts, but

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as I understand it Phillips has little or no production in the Scurry County field, isn't that right? A. They are not as substantial.

Q. That is what I meant.

If we assume that there is a small volume of gas out of the Scurry field that is now processed in the Fullerton plant or none of it is processed in the Fullerton plant or none of it is processed— A. (Interrupting.) Might I interrupt. I believe it is probably my fault. I talked about two things, Scurry in general. I brought it up to illustrate. The specific question dealt with Shafter Lake, and in the Shafter Lake now we have issued the order I was questioned about requiring the gas produced to be returned to the reservoir, and that gas, now, goes to Phillips plant, and that gas we are going to order taken away from Phillips and pumped back. When we left Austin a few days ago, the statement had come to us—that is an unreasonable order, we are not producing enough gas to do the job. All right, so we'll go out and order gas from outside this reservoir to be added to—and now, there I was partially answering your question. Whether we would be sustained in that order or not I don't know, but if it is absolutely necessary to put that gas back in to get the oil out, and if we have used all the gas locally available, I believe that if we are reasonable enough in requiring gas from outside sources to be brought in and put in, and that was, to the gentleman over here, was to the question he asked me.

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In Shafter Lake Phillips is a producer, and also is the operator of the Fullerton Gasoline plant that processes the Shafter Lake gas, and Scurry County was unrelated except that it is so darned big I brought it in on my own to us as an illustration.

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Examination by Mr. Crenshaw

Q. Going back now to the Shafter Lake order, where you have ordered all of the gas injected back into the ground, as already stated that has the effect of diverting gas that has already gone, that was going to, markets through Phillips lines and out to California, diverting that gas back into the ground. Now, then, assuming that the Federal Power Commission took jurisdiction of Phillips, and assuming further that they granted to Phillips a certificate of public convenience and necessity and that that certificate was based upon dedicated reserves of gas in that field, and then assume further that the Federal Power Commission would regulate Phillips Petroleum Company to the extent of saying to Phillips, you will take the gas that is produced in that field and dedicate on the basis of your dedication and put it in these pipe lines and supply those people in California, assuming that they made that particular regulation, then—

MR. McALLISTER: (Interrupting,) You mean order.

MR. CRENSHAW: Beg pardon?

MR. McALLISTER: Order, not regulation.

MR. CRENSHAW: Order through an order to Phillips.

BY MR. CRENSHAW:

Q. (Continuing.) —to take the gas based on those dedicated reserves, assuming that they regulated in that

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particular regard, then I'll ask you to state whether or not you have any opinion, if that happened, it would be

an interference with your power or with your order which you have promulgated in that field?

MR. McALLISTER: Mr. Examiner, I should object to the question, but I'm not going to do it. I'll merely state that if those conceivable absurd assumptions ever became reality, I'm perfectly willing to admit there is a conflict, but I'm not going to object. I'm perfectly willing to have the witness answer.

PRESIDING EXAMINER: All right, go ahead and answer.

THE WITNESS: Based on those assumptions, there certainly would exist a conflict.

BY MR. CRENSHAW:

Q. All right, sir. I'll ask you to state whether or not the dedicated reserves is based upon the same considerations and factors as Your order with reference to the prevention of waste and conservation program, are they any different?

MR. McALLISTER: I object to that, Mr. Examiner, unless there is a definition of dedicated reserves. I don't know what the term means. It is not defined in the dictionary that I know, and it is not defined in any contract.

PRESIDING EXAMINER: Well, let's see what the witness has to say about it.

MR. McALLISTER: Well, I mean if the witness is going to

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answer—that is all right, I can have him define dedicated reserves. He is going to define it before he answers the question.

THE WITNESS: I sure can't define dedicated reserves and if counsel confesses he doesn't know what they mean, I certainly would have to, my information is far more limited. I am fearful of the term dedicated reserves, even though I confess I don't know what it means, because if it were assumed that dedicating reserves meant that upon these particular specific wells and leases the Federal Power Commission felt they had authority to require the gas needed to supply a given interstate market to be produced from these particular dedicated reserves, then if that is what dedicated reserves means, I fear that there is grave grounds for conflict between the Federal Power Commission's authority and the state authority, and I don't worry so much about conflict between two authorities as I do the detrimental effect upon the public interest.

I can see three bases of conflict. One, I think, Mr. Baumel explained this morning. It almost never happens that the gas nominated by the particular company, the amount they indicated they'd like to produce, comes out to be the particular share that they get, from their own wells or their connected wells. It is a very rare coincidence, nearly impossible to attain, that they get from their own wells exactly what their market demand is indicated to be. So unless we have a freedom

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to make them look to the field and the state as a whole for their gas, not expect to get it from any particular connected wells, then we haven't got the power to prevent waste and to prevent inequities, to protect correlative

rights. That is number one. Mr. Baumel was discussing that this morning.

Number two is a matter that has also been discussed. I believe General Thompson first mentioned it. If we are going to utilize this casing-head gas we've got to have the authority at times to shove it in ahead of gas that may be dedicated from gas wells. Otherwise it is going to be blown to the air and none of us will have that gas to use, and so if the Federal Power Commission would say to company A which was definitely and primarily in the interstate transportation, business of transporting gas in interstate, say, look you have dedicated material gas reserves to us, don't you take any of that casing-head gas, you've got to produce from your dedicated reserves, or if we told them you can't produce from these dedicated reserves, you've got to hunt up in the open market your share of the casing-head gas, the Federal Power Commission would say, they no, they have these reserves dedicated, they have produced from them, and the third conflict I see would lie in the field illustrated by the Shafter Lake case, where I guess the Shafter Lake gas is dedicated and there is contracts to Phillips and Phillips in turn to El Paso, and we say, no, you can't produce that gas to interstate markets, you've got to pump it back in

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the ground and here comes Level Land and Slaughter where that gas is dedicated to El Paso Natural and we say you can't produce that gas to the pipe line, you've got to put it back in the ground. There is a third possibility of conflict.

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A. To come back to the common purchaser case, we have one currently going on on a particular specific issue but it might relate to our general authority, but in general we consider this common purchaser Act as an obligation aimed primarily at the purchaser. The fellow has certain legal recourse against him without ever invoking the Commission. They can be sued under that Act without bringing us in and ordinarily we don't come in, it is relatively rare, but occasionally we have to come in and tell pipe lines to take from everybody. Of course, we pretty well handle that by a uniform system of allowables. One thing more on the illustration. You see, there is a relatively uniform posted price for oil. It varies in different areas, but always within a given field the price is the same and within a given area all of the same quality is the same price. The Commission doesn't go into the price of oil, and it is not for us to say whether it should be "X" dollars or "3X" dollars per barrel but the uniformity of the prevailing price enables us to avoid a lot of conflict there. One company doesn't come in and have a contract to buy oil from particular leases at half the price that somebody else is selling the oil for. So it makes it so doggoned much easier to swap around, to interconnect. One pipe line can deliver oil to another and it is all the same priced oil so it is just gathering

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charges involved, they swap it back and forth and it takes an awful lot of swapping to see that all of this intricate system of pipe lines and all of the fluctuations of demands

up and down, we never do look to see who has the need for so much oil, we don't do that at all, we add up the total need for the state and divide it among the fields in the state, and Humble may need twice as much oil as they are connected to, they may come in and say we have war contracts, you let our field supply, they have done it, but they didn't get anywhere.

I have diverted, but I think it illustrates the situation that we are approaching with regard to gas. The time is going to come when we are—we are already doing it partially, but we don't do it uniformly over the state. The time is going to come when we will look to the total demand for the entire state and we'll throw in this casing-head gas first just like we throw in natural gasoline first in computing the demand for oil, because that natural gasoline has to be produced, so we'll throw in this casing-head gas that is to be marketed first and then we'll put on top of that or subtract that from the total demand and what is left we'll distribute to all the gas fields in the state on some equitable basis.

That may mean that an interstate pipe line with dedicated reserves, whatever that means, can't get near the gas they need. They've got to get out in the open market and hustle for it, and if they wouldn't pay the prevailing price for that gas, they

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might not get any, we don't say it ought to be this price or that price, but if the pipe line doesn't pay, it doesn't get any gas just like the company doesn't get oil now.

BY MR. CRENSHAW:

Q. What about the situation— A. (Interrupting.) Did I make that point clear? I appreciate the tolerance here because I am going afield from what I should, I guess, but there in is our concern. We respect completely the prerogatives of the Federal Power Commission to regulate the interstate movement of gas, just as conceivably there could be a federal authority which would regulate the interstate movement of oil, but we feel it inherently must remain within our authority and responsibility to say where the gas is going to be produced and in what quantities and not to have to consider, well, is this oil dedicated to Humble to go to Standard New Jersey or is this gas dedicated to Phillips to go to a such and such interstate pipe line. We can't take that into consideration or we'd never get it done fairly. That is our conception of responsibility, to look after correlative rights and to say where it is going to be produced and while we don't try to fix the price, we feel that natural economic factors are the best way of working out price and if that price would only get to be uniform, whether it is high or low, that is not for us to say, but if it would be uniform for the same gas in the same area, then this matter

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of exchanges wouldn't be nearly so difficult. That is where we run into a lot of static where the company says, now, give us more share of the market, we don't want to connect our neighbors, you can't make us, but when it boils down to it they may have got even a contract at a low price and they want to take a lot of gas from there. We don't

care. Well, we care, but we don't go into what the price is going to be. This difference in price makes it so hard to make the exchanges. Some of the companies have seasonal fluctuations and they have to swap back and forth if we are to work this thing out.

BY MR. McALLISTER:

Q. This price you mentioned applies to interstate movement as well as intrastate movement? A. That is right, yes, sir. You have allowed me a great deal of latitude here. Therein would be our concern, and presumably would be asked why are we concerned. It is none of our business but if anybody asks us our opinion, we don't take issue at all with regulating this gas interstate. We feel like we have to run where it is going to be produced and the matter of dedicating reserves could be an area of very serious conflict.

We have had one terrific difficulty in getting this casing head gas utilized.

Q. We've had an awful time in the Federal Power Commission as Mr. Baumel well knows—surveys have been made to find a means to get it into interstate pipe lines.

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A. Our companies don't want to put it in interstate pipe lines.

Q. They don't want to put it anywhere. A. That is one of the greatest barriers, I don't mean to intimate whether it is justly one or not, but one of the greatest obstacles we have had to the conservation of gas. When we have some oil that needs to be moved we don't think whether

it is to Phillips or Shell or Humble or a little independent that is going to truck it, we don't give a darn. It is an allowable and the producer doesn't care and we just look to whose the nearest to him to get him to go over and make the connection, but when we get to the matter of gas we find there is five million feet of casing-head gas being flared and we want to make a market. We find there is an interstate pipe line running by there and we ask them to put it in the interstate pipe line, well, the interstate line has commitments to certain areas and the companies wouldn't sell, they want to get it over here to somebody that is intrastate, so they won't be subject to the control of the Federal Power Commission.

There is our concern. We are not concerned at all about the complete regulation of gas that moves interstate, but we do feel it is the prerogative of the Commission that we've got to have the complete authority to regulate the production in order to discharge our first responsibility of conservation, and our second responsibility of preventing inequities.

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Q. Then it will help to solve this problem if they are all subject to our jurisdiction in some respect and they know that, and you order them to sell it, why, to the pipe line, if they produce it, they must sell it, isn't that right?
A. If they produce it—well, they don't have to sell it, they have to utilize it.

Q. They have to utilize it, that is right. A. To go back to my illustration of oil, if, say, you had authority over interstate oil pipe lines, we wouldn't worry about that,

but we'd think that the fellow who produced oil, the act of production, would be completely out of your sphere. We'd regulate production—

Q. (Interrupting.) I agree with you on that. A. We'd say this field is producing wastage. You've got to shut it down completely. We'd feel that was out of your province. Then such oil that was permitted to be produced by us, wherever it was produced, if it moved interstate in the pipe line, from the time it got in the pipe line I'd consider it under the jurisdiction of this federal agency. I don't see where there would be any conflict.

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Examination by Mr. Sparks

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Q. (Interrupting.) Let me read you, Mr. Murray, just one sentence out of the Natural Gas Act. That is Section 7 (b):

“No natural gas company shall abandon all or any portion of its facilities subject to the jurisdiction of the Commission or any service rendered by means of such facilities without the permission and approval of the Commission first had and obtained after due hearing and the finding by the Commission that the available supply of natural gas is depleted to the extent that the continuance of the service is unwarranted or that the present or future public convenience or necessity permit such abandonment.”

I'll leave this in front of you here so you can see it. Let's just assume that Phillips Petroleum Company is held to be such a natural gas company and assume that the facilities

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of Phillips Petroleum Company are held to be facilities subject to the jurisdiction of the Federal Power Commission, and we'll assume in connection with your Shafter's Lake situation that you order Phillips Petroleum Company and the producers to return that residue gas to the reservoir, which Phillips has in the meantime been selling to El Paso. If, under that statute, Phillips Petroleum Company is a natural gas company and if it ceases to sell and deliver that residue gas to El Paso Natural Gas Company and that the Federal Power Commission construes that to be abandonment of service to that extent, then the only basis on which Phillips Petroleum Company could obey the order of the Railroad Commission would be by securing the consent of the Federal Power Commission, isn't that right, irrespective of what Phillips Petroleum Company's contract with El Paso may state? A. It would seemingly follow to me. We are getting some letters from some interstate pipe lines saying they can't comply with certain—or that was the interpretation we made of the letters—I trust we must have misread it. They were saying they wouldn't comply with what we were telling them to do relative to production because they were under the jurisdiction of the Federal Power Commission. We replied back that possibly they couldn't but they couldn't keep on producing those wells.

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MR. McALLISTER: When you get some of those letters, would you be good enough to send them to the Federal Power Commission?

THE WITNESS: I think I haven't myself read the letters, and so I don't mean to be under oath testifying to them, but I think we'll get some of the copies of the letters up here.

MR. McALLISTER: I'd appreciate seeing them, because you know there are some times some people who will assume a condition feeling that if they can avoid compliance by their construction of what they would like to think for a particular purpose, why, they don't hesitate to use it, but when the two agencies get together you can see through their device and it doesn't avail them a whole lot.

THE WITNESS: We imagine that that situation would exist here.

MR. McALLISTER: Sure.

THE WITNESS: And I make no issue of the letters. They will be brought up here, but in answer to your question, if that were true, they had to go get permission from the Federal Power Commission before they could comply with our orders—

BY MR. SPARKS:

Q. (Interrupting.) Before we could desist from and change or reduce, abandon, the service of the deliveries of gas that had theretofore been made, then if they had to

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get such authority from the Federal Power Commission, that would conflict with your order, wouldn't it? A. Yes.

Q. And the only two grounds on which you can get that authority from the Federal Power Commission are, one, the completion and supply, which, of course, in this instance doesn't exist, and the other one, I think, has to do with public convenience and necessity, which would be a matter lying within the jurisdiction, of course, of the Federal Power Commission.

MR. McALLISTER: They used to say the Devil can quote the Bible to his own purpose. You can assume facts here that make an answer obvious when there is a particular end sought.

The assumptions which underly the answer which Mr. Murray made, which is a correct answer on those assumptions, he couldn't reach any other conclusion, but the whole vice lies in the assumptions and we'll take care of that some other place.

I agree with the answer. If I were on the stand, I'd have to answer the question just like Mr. Murray did, because the assumptions are so violent they are entirely removed from reality.

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THE WITNESS: Of course, I am at a loss here. I would assume that many of these presumed areas of conflict do not exist, just like the letter we got. Now, I imagine we'll get together and we'll find that they are in no wise con-

strained from complying with our requirements because it purely relates to the production and assignment of allowables and maybe they don't want to do it, we are accustomed to that device there, and we think they just say some other authority says they can't. So if the conflict lies simply on a basis of misunderstanding and misinterpretation, the question comes back, why are we worried about this.

The things that we in the Texas Commission haven't been able to understand is why the Federal Power Commission would care to assume jurisdiction over Phillips which to us is primarily in the field of production and gathering and processing gas, but it is all right in Texas and we've got to keep very close control over them in order to force compliance with conservation and correlative rights, so therein I guess that is what the whole suit is about here, whether they are or not, but there is the thing we can't understand, why you'd want them.

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MR. McALLISTER: Well, there is just this point about it, if under the law laid down by Congress our Commission is charged with an obligation to do certain things, you wouldn't expect us to avoid that obligation, would you?

THE WITNESS: No.

MR. McALLISTER: Let's make a violent assumption. If I didn't agree with the law, if I was employed to enforce the law, why, you would assume that I'd do my duty as I saw it under that law which I was obligated to enforce?

THE WITNESS: I understand that clearly. We have the duty under the law of enforcing certain unpopular statutes in Texas, and I've said it was much like prohibition used to be, the fact that it wasn't popular to enforce it didn't mitigate against our responsibility to discharge our duty.

Now, if you have a duty to follow the law and the law or your interpretation of the law would necessitate you coming clear on down and taking over the production, not taking it over, but controlling production, and we've got a duty, and under the law or our interpretation of the law, we have to run out here and run that production, too, then there exists a possible serious conflict that would be neither your making nor mine. That is, it wouldn't be anything we'd will if they'd let us sit down and fix up the regulation. We'd probably fix up our areas, and you'd say, Murray, you take care of production down there, and I'll take care of

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interstate transportation," so it would seemingly be important to bring those out and possibly we could get clarification of the law so there would be a clearer picture.

MR. McALLISTER: If that is necessary. Personally in my own concept of our realm of regulation, it is such that I don't see where there can be any possible conflict myself.

THE WITNESS: I have wondered that it would exist, but the Federal Power Commission's interpretation of their duty under the law to come on down and take jurisdiction of Phillips—it appears to us—and we don't quarrel with

you, we commend you for discharging your duty under the law, even though you don't write the laws, and you might not be in agreement with every provision of the law, we have to do a lot of that ourselves, but we've got a similar conflict right now on our control of interstate truck lines. They are persistently and flagrantly violating our Texas regulations, this interstate line that hauls commodities intrastate, completely beyond their authority and in violation of our regulations, but what are we going to do? Can we stop them? It is argued that if we do anything to them, you can't touch them, that will be interfering with interstate commerce.

So there is a conflict that has us worried. We are much more worried about this thing right here.

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A. I don't want to run away from counsel here. We feel that just good old basic economic factors, supply and demand, competing sources, competing fuels, works those things out. You don't burn mahogany because it is too valuable for other purposes, and our feeling was simply that you will use gas as long as it is cheaper to get it than some other fuel, and you might use it a little longer because of its added convenience, but that coal and fuel oil and electrical energy and gas all inevitably have to work freely in competition with each other. You might say,

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for example, that in Bartlesville here there is just one bakery. You wouldn't want the price of bread to be regu-

lated, but if you just had one bakery and you couldn't bring any bread in from outside, you had a monopoly, and therefore the public interest, since there existed a monopoly, demanded the price of bread be regulated, that wouldn't mean you'd have to go out and regulate what the farmer got for his wheat, because it went into making bread.

We don't quarrel at all with the regulation of the earnings of this interstate pipe line, because up there in Wisconsin I guess you don't have a whole lot of choice of who you buy your gas from, and so you can regulate what that pipe line earns, but I'll be doggoned if I don't feel that down here where the gas is produced it ought to be at a fair market price, prevailing price, not go into what it costs to find the gas or anything else. If you were buying Texas oil, you don't expect, and you do consume a lot of heating oil in Texas, but I never heard it argued that you had a right or asked a federal agency to come down here and regulate the price of fuel oil.

BY MR. TULANE:

Q. That is true, Mr. Murray, but there are various oil companies you can buy from. When we buy gas we buy from one source, one pipe line. The State of Wisconsin has special legislation to allow you people to come into

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our state and now the price of gas has been raised about three times since the initial contract was made. We have no one else to turn to. A. Isn't nearly everything you live with or eat raised a whole lot? We pay too much for our meat and too much for our clothes.

Q. It is true that there is inflation, but isn't it a theory of law that is followed in even the most conservative society that when anybody has a monopoly they must be subject to government regulation? A. I wouldn't quarrel with that at all, but Phillips doesn't have a monopoly on the gas.

Q. They have a monopoly on the gas we are getting. A. You are perfectly free. You can't look to one particular well or field for gas. If you are going to get gas from Texas, we'll do our best to see you get it and we want you to have the cheapest gas through the years as possible, but you've got to look to the fields of Texas for your gas, and it has to be interconnected enough to where we say, no, you don't take any gas from Phillips, we've got some casing-head gas you've got to take. Therefore, you ought to pay a prevailing price for gas down here, whatever that is, just like if somebody had a monopoly on the distribution of fuel oil in your state, you wouldn't control the price of oil down here, but you wouldn't expect him to

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come down here and pay vastly different, three times, the prevailing price.

All you'd do is expect him to pay the posted price for his fuel oil. Then you could regulate his trucks or pipe lines to get it up there.

Q. What about the prevailing price of that gas before you put the pipe line in? A. Your point is it ought to be frozen?

Q. No, we want to buy your gas, we want to pay a fair price, but we feel you have a monopoly and when

you have a monopoly, your gas— A. (Interrupting.) Excuse me, you say “you”. Do you mean the State of Texas or Phillips—

Q. (Interrupting.) I am referring to the State of Texas, not you personally. That gas would have little value unless they had the States of Wisconsin and Michigan and possibly Missouri for a market. What would the prevailing price be if you didn't have those northern states for a market? There is no such thing as a prevailing price aside from that market. A. What we need for the best interest of Texas to do with that gas is to use it here. We are sacrificing our industrial future in order to supply you with gas. I have raised my voice in protest, I have been criticized, because I do know that the future of Texas depends on keeping

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the gas and using it as a fuel, it is the only fuel we have. When our gas is gone, we're through, you can go somewhere else for coal or something else, we're washed out, but more importantly as a raw material gas is too valuable as a chemical raw material to ever even be burned, but still we say—no, I say, don't try to stop it from going up to Wisconsin, don't stop it from going anywhere, just let these things work out under the economic laws and free competition.

If an industry will come down here in Texas and pay more for that gas than you all are willing to pay, then it ought to be free to buy the gas and use it down here. Such an industry would give us jobs and buying power, many things, we know, but we have never tried to cut them off

from that. I'd better say I haven't, because there are some who say it ought to be stopped.

We could argue about the value of gas. What are you going to set as a fair value for gas? Compare it on Btu with oil or coal. You, of course, know how it stands that way, but I can make an argument that you can make nylon hose, fertilizer, rayon, explosive, rubber, out of gas, that it has a whole lot more value than an equal pound of coal or heating oil, but to me the thing has just got to work itself out under the free laws of supply and demand.

If you are going to come down here and freeze a low

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price, then that would work to your temporary advantage. I am saying you now are representing the consumers up there, but pretty soon—that is the one thing we ran into, the courts nearly knocked our orders out on, this flared gas, because we were ordering them to do something that they could show had to be done at a loss, and by the rise in price that has taken place in the last few years, it has made it possible for us to get this billions of feet of casing-head gas utilized.

You say your consumers are paying the bill. What is a few cents a thousand when we market that gas down here—I don't know what you pay, but a few cents a thousand isn't a very big percentage of your retail price up there. The cost of transporting it and all is so much bigger than three cents, or five cents or ten cents a thousand, and yet it means a difference down here, whether we can afford to save it and whether we can afford to drill for it and

develop it. What are you going to do if we can't afford to keep on developing our gas? You'll have to double your price in order to amortize your pipe line over a short period of time and then you are out of gas.

I am representing the Railroad Commission and we are intervening in this case, but we don't stand in Phillips' shoes here and we don't expect them to accept everything we say. Heck, we have a lot of controversy with Phillips down

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here. Our duty is to the consumer. There are a devil of a lot more consumers in Texas than producers, but our duty is to see they have a supply of gas over the years, and we think we are looking after the interest of consumers in Wisconsin just as much as we are in Texas.

Q. Let me interject this. We want to buy your gas. We want to pay a fair price for it, but we don't think you are justified in assuming the Federal Power Commission will not give you a fair price and we don't think we should be subject to the arbitrary whim of some company not even subject to your commission, as to the price at which it sells. A. You burn our gasoline up there, don't you?

Q. Yes. A. And our heating oil?

Q. Yes. A. Do you think the federal authority ought to come down here and regulate the price of crude oil?

Q. As long as there are two companies competing with each other, no. A. There is a lot of competition among various gas companies for gas and there is competition between gas and all other fields. That is the point I have been trying to make, that you can't look to any one source for

gas, no more than Humble, who had commitments to sell to Standard of New Jersey, could look to a certain Texas oil field; they

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had to look to the state as a whole, and we'll endeavor to produce the gas you need from the state as a whole, and we hope it will be a fair and reasonable price, but if one company has to charge too much, you have to be set up where you can get it anywhere, take it where you can get it the cheapest. We have so far taken a stand against our state having authority to fix a minimum price on gas.

We have definitely admitted that dreadful waste is taking place; a billion feet a day alone in the Panhandle Field being flared. Why? Because the price wasn't enough to cause it to be utilized. All this casing-head gas, billions and trillions of feet through the years that has been flared, but we said in time the intrinsic value of gas will be recognized and we'll fight it today, and as soon as the price rises to a reasonable economic level, then it will be possible for us to conserve the gas.

We have a bill in our legislature wherein we may be given authority to set a minimum price. We don't want that. We are, I guess, out of the times. We don't want to control the minimum price, we don't want other prices fixed, we think the consumer profits most by having free competitive system. I may be the last guy to hold on to that philosophy, I don't know.

* * *

[3673]

THE WITNESS: I think I can briefly give a better

answer to the gentleman from Wisconsin than I replied a while ago. The Texas Railroad Commission has a responsibility of regulating the domestic price of gas. Now, there is a certain field overlapping the federal commission, if it is

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an intrastate pipe line or company and selling gas solely in Texas, and we regulate the price. We have had a lot of cases, a lot of litigation in the past, a lot with Lone Star, for example, say, in Dallas, they had a monopoly, had, one time in Dallas, so we had the responsibility of fixing the price they could charge, but we never went back to trying to fix the price that the producer received because at Lone Star you just go pay three cents or ten cents, whatever the competition, because there are a lot of producers of gas; then from the time you pay that, then we watch what you do from then on. We look into your total capital investment and give you a reasonable earning on it, and we have to discharge that responsibility.

Our interest isn't to represent the producers here, as you can well see. We hope we do the right thing whether it is politically expedient or not, but we are elected and there are a heck of a lot more consumers of gas in Texas than there are producers, and we move in every chance we can to force a reasonable and the cheapest—which is our definition of reasonable—price of gas to the consumer, but we don't meddle with what the producer gets, because if we did meddle with what the producer gets, presumably our only legal basis—for example, we might say, Mr. Producer, what do you have in that well? What did it cost

you? How much do you have invested in finding gas and so forth? You

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see, the first thing you knew you'd be claiming a lot more—up to now the producer has rarely realized his investment out of the gas and we think the consumer has profited by us not trying to regulate the price of gas, just letting them freely compete for it, and I feel you will profit the same way.

If one company controlled all the gas in Texas, boy, that would be a vastly different situation, but the fact there is free competition between the producers of gas, just as in oil, makes it seem to us that we ought not to fix price. We ought to not have the authority to raise it up. We may be given it, and then we are sure enough going to be in conflict, I guess, but we like to let you get it as cheap as you can wherever you can, and then the company that has a monopoly as a pipe line—I don't understand that your company produces in Texas?

MR. McALLISTER: Michigan-Wisconsin does not.

Might I ask you one question there, Mr. Murray, and that is this, you have never made any study to determine whether or not with respect to the supply of gas to a particular pipe line, whether one or more producers may have such a control over available gas that it amounts to a monopoly, you have never made a study to determine that, have you?

THE WITNESS: I have made a considerable study on supplies of gas. I won't say my studies should permit me

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to reach a conclusion, although I didn't make the study for the purpose of determining that fact, and I don't think that any producer in Texas has the control over the supply and no pipe line can afford to be dependent upon a single producer because we are not going to let it work out that way.

I have been explaining earlier that if we have the right to fix allowables, if Phillips is the only source of supply, Phillips isn't going to be given the allowable that enables them to meet the demand. We cannot permit Phillips to produce the gas you need in Wisconsin.

MR. McALLISTER: I mean they supply all the gas that goes up there, they have a contract to supply that and the pipe line company has a contract which obligates them to buy all the gas from Phillips.

THE WITNESS: Even if you can get it cheaper somewhere else?

MR. McALLISTER: Yes.

THE WITNESS: Suppose Phillips can't produce enough?

MR. McALLISTER: I don't know.

MR. SPARKS: Oh, oh, under the contract in that situation, Phillips can supply the gas from the dedicated acreage and they can go out and buy it anywhere they want to.

MR. McALLISTER: Well, they have to take it off of you,

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and you have been supplying it—

MR. SPARKS: (Interrupting.) Whatever can be produced from the acreage that is dedicated to the contract.

MR. McALLISTER: Or otherwise. You can supply it even though you can't get it out of your dedicated acreage.

* * *

Examination by Mr. Sparks

[3683]

Q. Mr. Murray, what is the basic purpose of conservation of oil and gas? A. Well, the basic purpose—

MR. McALLISTER: (Interrupting.) You are relating that to the operations of the Railroad Commission of the State of Texas and the State of Texas?

MR. SPARKS: The operations of the Railroad Commission and the basic purpose of the conservation laws of the State of Texas as you understand them as the Railroad Commission enforces and interprets the laws.

THE WITNESS: Well, I was about to give you an answer as to why I felt conservation of oil and gas in general was so important. If it relates specifically to conservation in Texas, I'll add certain other qualifications. In general, it is tremendously important because thereby we can assure for the longest period of time an abundant supply to the consumers and

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at the lowest price. It is particularly important in Texas because oil and gas represents so large a portion of our natural gas resources, our major mineral wealth, and we recognize that the quantities of oil and gas we have are

fruits. We keep discovering additional quantities but still we know they are fruits. The nation will suffer if we have to turn to other sources for our supply of oil and gas. Texas will suffer particularly because its principal economic resource will be exhausted, so the very economic lifeblood of Texas is oil and gas. The security of the nation is very vitally dependent on the oil and gas reserves of Texas, so the consumers of the nation that may be using Texas oil and gas and those concerned with the military security of our nation and every citizen of Texas who has any stake in the economic well being of our state have a vital concern in the conservation of oil and gas. Did that answer your question?

BY MR. SPARKS:

Q. Yes. In accomplishing the maximum conservation of oil and gas, is it the purpose of the Commission and the conservation laws of the State of Texas to so regulate the production of oil and gas that the maximum of oil and gas that is produceable from reservoirs is recovered? A. Would it be any trouble to read the question back to me.

(The question was read by the reporter.)

[3685]

A. Yes.

MR. McALLISTER: Mr. Examiner, might I ask the witness one question there.

BY MR. McALLISTER:

Q. You say the purpose of the laws and the Railroad Commission, the laws speak for themselves I presume?

A. Yes, although it has taken a good many years to have

them interpreted to where they spoke clearly to all of us. My understanding of his question, and I fear I possibly missed some of its content was he asked me if in following the laws and carrying out the duty of the Railroad Commission to accomplishing maximum conservation was it our purpose to regulate production so as to accomplish maximum conservation.

Q. I don't know whether Mr. Sparks meant anything by putting in the words to have you interpret the laws or the statute or whatever it was, but I think your answer makes it perfectly clear what you had in mind. A. It is our interpretation of the statutes and we have so concluded from the court decisions that that is the primary duty of the Railroad Commission in the conservation of oil and gas is to accomplish the maximum conservation.

MR. McALLISTER: Thank you, Mr. Murray.

BY MR. SPARKS:

Q. Mr. Murray, the very concept of conservation of oil and gas includes within it as a major premise that the objective is to secure the greatest ultimate recovery from the reservoirs

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of oil and gas discovered— A. (Interrupting.) Yes, that would be our definition—

Q. (Continuing.) —because that that is not recovered is lost? A. That is right, in other words, that is our definition of conservation, attaining maximum ultimate recovery.

Q. And that which is left in the reservoir and not recovered is in effect wasted insofar as any useful purpose to humanity is concerned? A. Yes.

Q. Is there in your judgment any relation between the price of gas and accomplishment of the purposes of conservation and maximum ultimate production and recovery of gas from reservoirs?

* * *

THE WITNESS: I would answer definitely yes. I was about

[3687]

to elaborate as to what relationship I felt existed, but possibly I should wait for a question.

BY MR. SPARKS:

Q. I'll ask you that next. What is, in your judgment, that relationship? A. I think I made some statements yesterday indicating specifically that relationship in certain instances. We have had to waste a lot of gas in Texas because the prevailing price was too low to make it economically sound to conserve that gas. I mentioned that particularly relative to the flaring of casing-head gas in my testimony yesterday, or at least I intended to.

PRESIDING EXAMINER: I thought you made that quite clear, Commissioner. I am just wondering whether or not it is going to be necessary to go back over it.

MR. SPARKS: I am not going back over that.

THE WITNESS: If I did make the point clear yesterday I'll pass on. Conservation of casing-head gas is particularly sensitive to the price of gas. Conservation of natural gas, recalling the definitions I gave yesterday, that is gas from a gas well, is sensitive to the price of gas. No gas well produces all of the gas that can be produced. It is produced until it reaches an economic limit. It is still

capable of producing gas, but the rate of production is low and the cost of operating the well may be high, and so at the then prevailing price for

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gas a point is reached where it is no longer economically sound to produce that well, and so it is abandoned. If the price were higher, the well would be produced longer and the ultimate recovery would have been greater.

BY MR. SPARKS:

Q. And if the price were lower, the economic limit would have been reached sooner and there would be an abandonment of the well at an earlier date with a greater loss or greater volume of gas left in the reservoir and not recovered. A. That is correct. Now, I discussed somewhat yesterday what we call secondary recovery of oil. To some degree those same principles would apply with regard to gas. Not only is there cost involved in maintaining a well in operating condition, but a point is reached where the pressure of the reservoir, if it is a depletion type reservoir, the pressure in the reservoir no longer is sufficient to force gas through the pore spaces of the sand into the well bores, thence to the surfaces of the ground, thence through lines to the gathering line, and if compressors are installed, in some cases—West Virginia is one case I know of—the price of gas is sufficient to justify pulling even a vacuum on these producing wells which greatly increases the quantity of gas that can be exhausted. In Texas, generally, this isn't true of the Panhandle field, which, I guess, is most concerned here, but generally, particularly in the Gulf Coast, we consider 500 pounds as the economic

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limit. I don't mean I, the industry generally. In other words, when you get down to 500 pounds you abandon your well, because it isn't feasible to install compressors and gather the gas at lower pressures. As the price goes up the abandonment pressure of the reservoir will go down, and so there is another evidence of the relationship.

There has been a recent discovery or a tentative conclusion reached in the laboratories presently being subjected to field tests that has startled us a good bit. A depletion type gas reservoir or volumetric type as I have been referring to is one that is sealed off, it has just got gas in it. It is like air in a pressure tank at a filling station.

Q. You mean it doesn't have a water drive from the bottom? A. That is correct, it is sealed off, and the gas is produced as long as there is enough pressure in that reservoir to cause it to be produced and that was the type I was talking about abandoned at a pressure of 500 pounds.

Q. The Panhandle field is that type of reservoir? A. Correct.

Q. And the Hugoton field is that type of reservoir? A. Yes. Now, there are a great many gas fields that have water drives. Most of the gas fields of the gas companies, for example, are water drive fields, and we have always concluded without particularly inquiring into it that recoveries from these drive gas fields would be high. We just didn't bother to do

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a lot of testing. We figured, well, with the water flushing the gas out and gas being so much lighter than water it

would just rise above the water and we'd get 90 per cent or better of the gas recovery.

Q. And as you have experienced, for example, in oil fields with the water drive? A. Well, we didn't exactly correlate that. I said yesterday 50 to 80 per cent was the ratio of recovery in a water drive field. We came to assume as we came more and more to realize, it is dangerous in the oil and gas industry to make any assumptions without testing them out. We thought recovery of gas from a water drive field was so simple we didn't need to worry about it, you'd get just about all of it out. We have recently discovered that recoveries of gas from a water drive reservoir will be about the same as recoveries of oil. In other words, what we had thought to be the most efficient type of recovery in a gas field, we now conclude we will get from 50 to a maximum of 80 per cent of the gas out, or to state it conversely, in the best of water drive fields you will leave more than 20 per cent of the gas and in many of them you'll leave as much as half of the gas. Well, now, all of those fields we have been counting on getting about 90 per cent of the gas, and I daresay again being permitted to divert, but I daresay this will be of some measure of interest to the Federal Power Commission because they take considerable interest in the

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reserves of fields, and I daresay they have presumed, because that has been the basis of many very able engineering and geological reports on recoveries, that you get about in the range of 90 per cent from these water drive fields.

Now to come back and say we may get only half from a water drive field does two things. It makes us take another serious look at the reserves we thought we had and we see we can't recover, and two, it starts us thinking, isn't there some way of getting that gas out. I did a bit of talking yesterday about these many barrels of oil we are leaving behind and our great interest to try and get them. As soon as we realize we have been guessing wrong on water drive gas reservoirs, then the next question is let's see for sure if that is true and then let's figure out something we can do about it. I don't think there is even anything in the literature yet on these conclusions.

Back a good many years ago there was some that pointed the way to it, but we didn't read then, I mean we didn't read between the lines. We saw these conclusions, these research results and left them hanging there; as so frequently happens some new discovery is made and you find that 50 years ago some pioneering researcher pointed the way there and we forgot about it. This was pointed the way to a good many years ago and now we are going back and testing it.

We are core drilling gas reservoirs and finding out of these cores there is half the original amount of gas left behind.

[3692]

My point there, again I recognize and I apologize for diverting this much from the particular issues in this case, but I think it is pretty important for all of us to begin to pretty searchingly look at these gas reserves. We don't want to count on the gas we don't have, and, two, I can

now answer more specifically your question as to the relationship of price because we think already we see techniques are possible for getting some of this gas that would be left behind, but it costs money to do it, not exorbitant quantities but it costs several cents per thousand to do it and so unless the price is high enough to permit what we might refer to as secondary operations in a gas field, we can't get that gas and it can amount to as much as 50 per cent in a field we thought previously we'd just sit back and get all of it. I have diverted but do I make my point clear?

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[3696]

Q. Yes. In addition to the situations you have mentioned, is there not in most gas fields and particularly for example in the Panhandle field acreage, both within the field and around the edges of the field where the sand is tight or thin, with low porosity and permeability, so that wells with low productivity, if drilled, can be expected. A. Yes.

Q. And is there not a relationship between price of gas and the amount of development which will occur with respect to the low productivity areas which exist in virtually all fields at some place or other? A. I believe I understand your question. In nearly any field there will be areas of productivity that at a given price it is not economically feasible to develop when at a higher price, it is possible to go in and develop those marginal areas and greatly additional recoveries can be expected. That is true in most fields. Portions of many fields, let me say. It is also true that some entire fields, large areas, are of such a low order

of magnitude of productivity that at a given price you can't develop the field at all. At a higher price it could be. Possibly I intended to and believe I made some reference yesterday—in times past when gas price was lower and markets unavailable it was common when you drilled for oil and encountered gas strata just to abandon the well. Only in relatively

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recent years has there ever been any intention of deliberately drilling for gas, and so the fact that great areas of gas in the past have been drilled into and abandoned because it wasn't economically sound and frequently they were just left open to the air—not so very many years ago a well drilling for oil blew out of control producing from a substantial gas reservoir. The operator just went off and abandoned it. They said we are not interested in coming back and doing the necessary work to bring this well under control and it sat there, and burned many, many millions of feet of gas daily, until the Railroad Commission—I was then in their employ as an engineer and was in charge of the operations—we took it upon ourselves to go in and kill that well.

Now, I cannot conceive today with a higher price for gas of the operator just walking off and leaving a well blowing about fifty million feet of gas a day in the air because they didn't want to spend the money to control it. I think now I have fairly generally answered your question of the relationship between price for gas in the conservation of gas from gas wells and the conservation of

casing-head gas. My discussion on casing-head gas was principally given yesterday.

Q. Are there not areas of low productivity from which small wells, low productivity wells, can be expected in the

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Hugoton field? A. Yes.

Q. Is there not a relationship between price of gas and the volumes of casing-head gas which a gatherer can afford to extend his gathering system to collect—

MR. McALLISTER: May I hear that question, please, Mr. Examiner.

PRESIDING EXAMINER: Read the question.

(Last question read by the reporter.)

THE WITNESS: Very definitely. There is still a great deal of casing-head gas being flared in Texas that we hope to see utilized some day. At the present time, price for gas does not permit laying the gathering lines and compressor plants and processing plants and treating plants to handle that gas, and a lot of the casing-head gas conservation projects now in operation were built in contemplation of a higher price for gas than then or now prevails. It just seemed inherently sound to anticipate that gas would seek something nearer its level in price as represented by its intrinsic value. I mentioned yesterday its use as a chemical raw material but forgetting all that and just comparing it on a Btu basis with the cheapest of fuel, say, coal, the one of which we have the most abundant resources, and you would presume that gas at the well head would be bound to somewhere approach the

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price of coal at the mine shaft, and so we persuaded a good many companies to put in casing-head gas plants predicting to them that it had to seek its natural level and that even though they'd have to operate at a loss for a time that the price would rise to where it would be an economically sound operation.

MR. McALLISTER: Might I ask a question there?

MR. SPARKS: Certainly.

BY MR. McALLISTER:

Q. Do you think the price of gas in the State of Texas should be geared to a price which would be the mine price of coal plus transportation costs to Texas? A. If by geared you mean if some authority regulated it to that, I say no. I think that as long as we have competition between the various sources of energy and competition within those sources that there oughtn't to be any gearing by any authority, that it ought to — supply and demand ought to — work those things out. That is a theory of mine. I believe in that system of economics, not so much because of the danger to the form of government when you have too much government control, I fear that danger, but also looking only to the welfare of the consumer. My philosophy of an economic system is one which does the greatest good for the greatest number. Therein, I wouldn't differ from a communist, I guess, but my practical observation as

[3700]

an engineer has convinced me that under the capitalistic system you get the greatest good for the greatest number

and therefore if the communist was sincere in his alleged objectives and would look at the results with realism, compare what happens in his nationalized countries with what happens in a free enterprise, just for the common working man, I think we'd both conclude inevitably that you get the most good, and I am such a fanatic on the subject of conservation and so steeped in its meaning to the national welfare that although I would be appalled at the system of political doctorate that would give control to our federal resources, I would agree with that if in the long run it would give more to the public, but my studies have so firmly convinced me that only by having a minimum but a necessary amount of regulation by federal and state authorities and having a maximum of free enterprise, if it gets too much the price is low and if it gets scarce the price is high and that stimulates them to go get more, that is the only way in the history of the petroleum development of the world that any success has been attained.

I made yesterday a statement in serious conflict with the philosophy of a number of people in Texas and possibly in conflict with what may turn out to be the philosophy of our state legislature. I said yesterday that there is a relationship, in answer to Mr. Sparks, there is a relationship

[3701]

between price of gas and conservation. Come future years we would have paid many times what would have been required for recovery now, we would have been glad to pay many times that, but it is gone and doesn't do any good. I still don't want us to have the responsibility and short

of gearing gas price to any arbitrary standard. I just want to see it worked out, although it is sometimes kind of impatient to sit back and see the waste taking place while it is working out, but I think that will be the best results for the consuming public in the long run.

BY MR. McALLISTER:

Q. When you speak of competition between fuels, you mean your conclusion is based upon the assumption that there is the opportunity for that free competition? A. Yes. I hate to see gas burned for what to me as an engineer and a little smattering of its chemistry tells me is inferior uses. I hate to see gas burned where coal would do just as well.

Q. Under boilers and just, you might say, used in a line in some slack period of the year? A. That is right, I hate to see that.

Q. So do I. A. But I feel it would be more dangerous to say you can't burn it under a boiler if they can get it cheaper than they can coal or rather use it, it seems to me that

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intrinsic worth in a free competitive system is going to work the thing out better than any controlling board.

* * *

[3704]

Examination by Mr. Sparks

Q. From your knowledge and information as a Railroad Commissioner and knowledge of the industry, is it your judgment that there is competition among the producers and gatherers of

[3705]

gas?

* * *

THE WITNESS: Well, broadly speaking I'd say very definitely competition existed. There are thousands of producing gas wells, many hundreds of different operators of gas, that they are going to sell to the—take the best offer made to them by a purchaser of gas. In turn, the purchaser has all these sources of gas to look to, and he is going to buy his gas presumably where he can get the best supply over the longest period of time at the cheapest price.

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[3717]

Examination by Mr. Crenshaw

Q. Mr. Murray, you have already testified to the expense, the high expense that entails to conduct processing plants and gathering systems in order to utilize casing head gas in the production of oil. Is it so or not that the taking of natural gas or dry gas as compared to the processing and constructing of plants and so forth to market casing-head gas is cheaper. A. Whether taking of gas from natural gas wells is cheaper than gathering casing-head gas?

Q. Yes. A. That is a dangerous question to answer generally, but to answer it generally I believe I'd say yes. In general, it is cheaper to take gas from a gas well than to utilize casing-head gas. There is no question in general that is true.

Q. Based upon that general conclusion with reference to the relative cost of this processing and producing, I'll

ask you this question. Assume that a producer in a field is producing both oil and gas and that he has been flaring his casing-head gas in the production of oil— A. (Interrupting.) Excuse me, he is producing oil,

[3718]

casing head gas with the oil, and in addition is producing gas from gas wells?

Q. That is correct. And that you see fit, with a hearing, after hearing, to order the ceasing of the flaring of the gas or shutting down of the oil well. In other words, you tell him to utilize the gas, casing-head gas, which has been flared, and as a result of that order and in compliance there with the producer then invests whatever sums of money it may be to utilize the casing-head gas and put it on the market, so that when he gets done with that process, under your previous testimony where you said that the casing-head gas must receive the first call, he then puts together with his natural gas production the casing-head gas and fills his market demand. With that picture and assuming those facts, let us further assume that the Federal Power Commission steps in and declares that this producer is a natural gas company and as such it then follows through with a regulatory order regulating the price of gas downward. Under those circumstances and assuming those facts, I'll ask you to state if you have an opinion as to whether or not that producer would then find it more economically feasible to take wholly or solely from his natural gas wells and discontinue the taking of casing-head gas.

* * *

[3720]

THE WITNESS: Possibly by answering this question I can avoid some of the basis of objection.

If the price of gas were lower—I'm making no assumption as to how it would come about—it could well result in it being impossible to go to the expense of gathering from each oil well its casing-head gas, collecting it, treating it, possibly sweetening it, compressing it, delivering it to a pipe line, and so we would see turned backward the thing I mentioned yesterday has evolved forward during the last few years when all of the casing-head gas was wasted and as the price of gas rose and as we were able to issue orders and have them sustained in the Courts, the Courts have pretty clearly indicated that the only reason they have sustained us was because the price apparently would reach a level where it would be economically sound, so the reverse could happen just as well. If anything reduces the

[3721]

price of gas then it inevitably follows we must go back to periods of wasting large quantities of casing-head gas. I haven't made any assumption as to whether the Federal Power Commission would do that or not. You all are more versed in these things than I. It is difficult to conceive of any regulatory body being concerned about the welfare of the public over the period of years, it is difficult for me to conceive of action, taken which would necessitate the wastage of large quantities of gas simply in order to realize temporarily a small percentage reduction in the retail

price of gas, which could result with the exhaustion of the supplies and a manyfold increase in price in years to come.

* * *

[3723]

BY MR. McALLISTER:

Q. You said to reduce the price. Supposing the price in a particular instance was 12 cents and it was reduced to 11-1/2 cents, which would still be the highest price in the field, your answer wouldn't apply to a case like that?

A. No.

Q. You were thinking of unduly depressed? A. I think we would lose our authority to require the gas to be saved. I'm speaking now only of casing-head gas, at the point when a reasonable return was not realized on that operation.

Q. You weren't speaking of the price levels that would go beyond that limitation? A. That is right.

BY MR. CRENSHAW:

Q: In other words, Mr. Murray, having issued the flare gas order after a consideration that to do so would cause waste, then would it not be that under the circumstances related in the question that if the producer could not comply with that

[3724]

order as a result of having been regulated by some outside agency that that would materially interfere with your conservation problems? A. Yes.

Examination by Mr. Sparks

Q. Mr. Murray, over the past 10 years have you observed, and particularly since 1945, I understand you have been on the Railroad Commission since 1945, is that right?

A. '47.

Q. '47. You have been, prior to that time, familiar with the oil and gas industry? A. Reasonably.

Q. And you have observed from the statistics of the Commission a general increase in the price of gas over the past 10 years, have you not? A. I have observed a general increase in price of gas, not from the statistics of the Commission, because we don't keep statistics on that phase of it, but I am generally acquainted with the rise in price of gas.

BY MR. McALLISTER:

Q. It may not run back 10 years? A. Sir?

Q. It may not go back as far as 10 years?

[3725]

A. My observation in?

Q. No, I mean the trend. A. No, the trend upwards you mean, I guess?

Q. Yes, the trend upward. A. No, there have been ups and downs. I fear my answer was not very lucid there. I have generally observed the trend of price of gas over the period of the last 10 years, ups and downs. For the last several years it has been predominantly upward. You can back up more than 10 years. It is quite interesting how much cheaper the price of gas was in, say, industrial sales in certain areas of Texas, oh, say, in the middle 1940's

than it had been 15 or 20 years earlier. Instead of going up it had been declining. I have quite a bit of statistics on that, but I don't see its relevance here.

BY MR. SPARKS:

Q. And has any of the conservation measures of the Railroad Commission been made practicable because of the increased value of gas, particularly casing-head gas, over the past few years? A. Oh, yes.

MR. McALLISTER: Do you use the word value there synonymous with selling price?

MR. SPARKS: Certainly.

THE WITNESS: I say the value of gas is basically the same or increases as new discoveries are made, but I sometimes make

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a distinction, possibly not one valid here, between intrinsic value and going price.

BY MR. SPARKS:

Q. I was using value in the sense of price. A. And I answered it on that assumption.

Q. In your opinion will future conservation measures of the Railroad Commission be affected by the price of natural gas? A. Yes. I didn't elaborate on that, because I presume my previous answers would indicate my reason for answering in the affirmative.

Q. Can you elaborate here with regard to future conservation measures which in your judgment will be effected by price? A. We are still flaring a lot of casing-head gas, I am possibly repeating myself, that we cannot now require to be saved because it is not economically sound to do it.

When the price of gas goes up, each time it goes up it brings in more gas that we can save. That is casing-head gas. Also I have discussed here earlier this matter of the loss of gas from a gas reservoir, and as the price goes up it will be possible to do more and more things to increase the recovery of gas, to get that gas that we are now leaving behind. I don't mean about surface flaring, I mean underground loss of gas.

Q. Underground wasteage through failure to produce it because it is uneconomical to make the expenditures necessary to produce it?

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A. That is correct. One of your earlier questions might indicate that I haven't been sufficiently clearing in stating that if you leave gas behind in a reservoir when you abandon it, that is just as bad as flaring it to the air.

Q. It is just as gone? A. It is just as gone, yes, sir, and someone could come back and say, oh, you didn't waste it, you know where it is, it is down there, but if it would cost you several times as much as to go down and redrill the field to try and get it out as it would be worth, then you might as well let it go to the air.

Q. The price would have to be tremendously increased to warrant going back into the field once it had been abandoned— A. That is right.

Q. And attempting to produce the gas left there underground? A. That is correct. And I would consider—now, this is probably not a legal definition that would stand up—as an engineer I consider as wasteful to fail to recover

something that you can now for a few cents more per thousand, even though you come back and get it later on for tens of cents per thousand, then I consider that difference in what it costs you to get it as waste. If you can get it now for three or four or five cents more a thousand and it is going to cost you 25 cents a thousand to come back and get it later, legally it might be argued that

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that wasn't waste, you got it but if it costs you 25 cents later to get it where you could have gotten it for five or less cents today I call that waste.

MR. McALLISTER: Could I ask one question there, just one question, a short one?

MR. SPARKS: All right. Just out of courtesy, Mr. McAllister I'll willingly accede.

BY MR. McALLISTER:

Q. Here is a field with abundant reservoir, let's say a trillion cubic feet, where the local sale price to carbon black plants and wholly within the state is five cents, the prevailing price in that field, with ample connections and reasonable outlets. A. This is sweet gas?

Q. Sweet gas, gas well gas. A. Excuse my interruption, but we wouldn't permit—that is not permitted to be sold for carbon black.

Q. I see. I got trapped myself. Let's make it sour gas just so I can go on. It doesn't make any difference what it is? A. If you will specifically make your illustration in the Panhandle field, then it would apply. We have a funny set of laws there. We don't—

Q. (Interrupting.) Let's make it in the Panhandle field and it will be sour gas and say a trillion feet which makes a substantial reservoir, and adjacent to that is another field

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that has pretty well, let us say, petered out, where no part of that gas can reasonably be produced and gathered and sold with any substantial profit for five cents, and this gas which is abundant can be sold. Now, would you suggest that the gas from the abundant field be raised in price to, say, ten cents or whatever would be necessary in order to permit the operators over in the other field to produce their gas and compete with the other field or would it be more economical to say that those operators in that field may have ten cents which would cut them out by reason of competition. Just how in your conservation problem are you going to meet that situation wholly within the State of Texas, forgetting about any gas on the outside, going to the outside? A. Well, my philosophy has been, I indicated yesterday about our refusal to take jurisdiction that it has been argued we have, over setting a minimum price. It has been argued that we already possess the authority to fix a minimum price, because if it is lower than that it is going to cause waste, and there is strong basis for such argument, but the Texas Railroad Commission—I don't mean to take issue with the wisdom of states which have done it, or I certainly don't mean to challenge our legislature if they clearly say this is our responsibility and duty, but even though we argue the arguments on fixing prices, I say we would just stay out of that, and we want

to get in and help all we can to attain conservation but we didn't want to go

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to the point of saying, now, the price of gas in this near-exhausted field you were talking about, it is going to have to be 25 cents a thousand because that is what it will take to recover it. Well, heck, that is more than the going price of gas and to me that wouldn't be conservation to allow them a price in order to gather that gas that is going to be more than it is currently worth in the open market. If we were trying to fix price purely on the basis of cost, I'm afraid we'd just get hopelessly lost in a maze of situation there and we'd be fixing price up higher than anybody would pay for it. We'd have to order somebody to buy it, I guess, if we are going to set the price up to 25 cents and yet that might be required to conserve this gas, so all we would do from the standpoint of the philosophy of the Railroad Commission, we'd just stay out of price and we'd hope the price would be high enough to permit these reasonable things in conservation to be done. As it gets higher and higher more and more things can be done in conservation and in turn as more and more things are being done in conservation we save gas being wasted and make it available to the market, we are doing three billion feet of that a day in Texas and as the price gets higher and higher, the fellows are encouraged to drill for wells. Instead of passing up gas strata they complete gas wells and that in turn makes a greater supply available and that in turn forces the price back down. In fact, that is our theory of the only way of keeping a

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reasonable price of gas through the years is to have it high enough that it furnishes an incentive to conserve and explore for it and that is the surest way of, one, having abundant supply, and two, keeping the price reasonable.

Q. Conservation and price go hand in hand and the price isn't the determining factor that is going to control conservation? A. Yes, it controls a great deal of conservation, but, and I don't mean to retract—

Q. (Interrupting.) I mean there are a lot of other factors. A. Yes. I don't mean to retract any of the statements I made of how closely geared conservation measure you could take was to the price. On the other hand I made that statement, I believe, in answer to questions by Mr. Sparks. On the other hand, I will say that our Railroad Commission takes a peculiar philosophy that even though we are the conservation agent we don't go out and try to control price.

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Q. You mean the higher the price goes the more you can conserve? A. That is right. The more exploration there will be for us, the more abundant will be the supply and that, of course, will bring the price back down.

Q. If it was a dollar per Mcf? A. We'd all be drilling for gas. We wouldn't waste a foot of it, and we'd have so much gas that the market would break and the price would come back down. That is our fundamental philosophy in Texas which I recognize is possibly not a commonly accepted philosophy today but we fundamentally

believe that in the long run the consumer will benefit mostly by that policy. Bear in mind, we have had some bitter litigation in Texas. Wherever a company had a monopoly going into a city, they charged whatever they wanted to, the customer had to pay the price or not get any gas, we have gone in and regulated those prices and have had some bitter feuds over it, but on the other hand I mentioned earlier the matter of industrial prices because competition existed, we haven't taken jurisdiction. I could cite a case, say, in Houston there where in the '20's request was made for the Railroad Commission to assume jurisdiction over the price of gas sold to industries and the Commission refused to do so. I may be a little wrong in my dates, the late '20's,

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I believe it was. In the middle '40's the price of gas, even though no jurisdiction had ever been assumed, nobody ever regulated it, the price of gas—and the general trend, market index had been going upward—the price of gas to those same industries was considerably less than a half of what it had been fifteen or twenty years earlier. Competition had been what had cut it.

BY MR. McALLISTER:

Q. On these long pipe lines going to outside states where if it is true a monopoly exists, you would feel, I think, from the answers you have made, that regulation is desirable?

MR. SPARKS: Of whom?

MR. McALLISTER: Regulations.

MR. SPARKS: Of whom, the pipe lines?

MR. McALLISTER: The pipe line company.

THE WITNESS: I might not say desirable, but I would say essential.

BY MR. McALLISTER:

Q. Yes. A. Wherever we move in and issue orders, we don't consider that that is particularly desirable, but that is the only way of attaining the necessary objective in the public interest.

Q. That is right.

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A. And so we never glorify in our authority to do such and such a thing. We would rather that natural forces would work it out so it wasn't necessary. And if it were possible to have enough of these long pipe lines, if you didn't have to build them so big and have so much money invested in them, if you could have enough of them, then I'd say regulation wasn't desirable, let them compete with one another, but that isn't desirable, and if it isn't desirable it becomes necessary. Our theory down here, the producer—the regulatory authority ought to see that pipe lines is taking advantage of the best he can get from the producer. If some producer will sell him gas cheap, why, by golly, go out and take it, but not to regulate the producer of gas.

* * *

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A. All right, twenty-five years. I doubt if Phillips says we hereby dedicate our reserves, they just sign a con-

tract tying their reserves up, and so out of that comes the term dedicated which simply means it is contracted for. I presume the escalator clause on the price was in that contract that committed those reserves for twenty-five years and if Michigan-Wisconsin could have gotten better prices

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for gas and tied it up that many years somewhere else they were perfectly free to do it and that the Federal Power Commission had full knowledge in advance before they ever granted this certificate of convenience and necessity of what those contracts and commitments were, and they could have said then, why, you are committing to Phillips, if the assumption is true, at too high a price, we are not going to approve this thing until you go get reserves dedicated, which means contracted, at a lower price. We have exactly opposite that situation existing in the Carthage Field. Their operators committed or dedicated, using the terminology here, reserves over a long period of time at what has turned out to be a disproportionately low price and on the free market gas in Carthage is bringing a much higher, two and a half to one or more, price to what they committed and they come into the Railroad Commission and say you ought to assume jurisdiction and you ought to make them pay us what the going price for gas is, we may have to do that. I mean the legislature may say that is our duty, but we said we didn't make you sign that contract, your neighbors over here were being drained for a while because they wouldn't sign the contract and they held out, they thought gas was going to

be worth more. If it had gotten cheaper you would have been sitting in wonderful shape with your contract and your neighbors would have to sell it for less, so we felt that was sort of a free right of the

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purchaser and seller to work this thing out and if Michigan-Wisconsin contracted to Phillips, I don't know the fact and this may be an erroneous assumption, but if they contracted to Phillips in order to get Phillips reserves tied up for twenty-five years and agreed to pay them so much now and raise it so much every year, why, they did that before they ever built the pipe line and the people of Wisconsin and the Federal Power Commission presumably had full knowledge of that, and when they were looking to decide whether or not there were gas reserves down there, they knew what they were going to have to pay for them under that contract and just as we have said to these people in Carthage who have dedicated their reserves and gotten themselves tied up at what they consider a low price for a long period of time, we said, fellows, we didn't make you sign your contract. It looks unfair for everybody around you to be getting more than you, but you signed the contract. Now, if Michigan-Wisconsin signed the contract and agreed to purchase gas, we consider that a sacred deal, too, even though the price may be higher than prevailing. I don't know whether that is true or not.

That is a long winded answer and I apologize for it, but that indicates our philosophy in Texas, why we won't assume jurisdiction in Carthage and make them raise the price, and why we don't think this sacred right of contract

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should be broken if they feel they contracted at too high a price.

BY MR. McALLISTER:

Q. Over in Carthage if the state gives you the authority and you fix the price over there at let's say, six cents or a couple of cents higher than the contract you are talking about, is there any authority in your state which would permit you if this price over here is too high to bring it down to what is a fair price? A. We don't have the first authority now—

Q. (Interrupting.) No, you don't have, but I am assuming you do get it. A. If we got it they might say you can fix it up or down either.

Q. You can only fix a floor, you can't fix a ceiling and a floor both? A. We don't think we can do it at all now—

Q. (Interrupting.) I know that, but suppose you are given authority, the bill is pending in the legislature. A. Frankly, I am embarrassed to admit this, but I haven't read the pending bill, that is an embarrassing thing for a member of the regulatory body to admit, but I wait until they pass them, if they do then read them.

Q. Do you think for the sake of the people of Texas, the producers, you ought to be able to raise the

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price, to fix the floor you might say on the basis of what you term conservation and then there exists no— A. (Interrupting.) Could I answer it part way, the first half, and then I'll answer the second half. I don't think we have

that authority. You are just talking about fixing a floor. I don't think we have that authority. I don't think we ought to have it. We don't want it. Now, we are in serious disagreement with a lot of sound thinking reasonable people, we recognize, but if it is an honest difference of opinion there is no use dodging it. We don't think we have the authority, even though some have, and briefs can be presented to us as to why we now have the authority, and we don't want it, and we don't think we ought to have it, and we don't think in the long run it is in the best interest of the people of Texas or the nation for us to have that authority, and for that same reason it would be inconsistent, I think, for us to come here and oppose you fixing price on the producer and at the same time seek the rights to fix price ourselves. It possibly would be consistent. We could say this is something the states ought to have and not the Federal Government, but we are doing more than that. We are opposed to the basic principle, rather than who has the authority, state or federal, and this may be a last ditch stand, but we are opposed to price fixing at the producer level.

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Q. But if there is that authority you state given and exercised to fix a floor, isn't it by the same reasoning proper that some authority protect the consuming states so far as the ceiling is concerned? A. I would presume so.

Q. I mean wouldn't that be your judgment? A. Yes, sir.

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Examination by Mr. Sparks

Q. Mr. Murray, the Federal Power Commission has certain powers for requiring a natural gas company, that is, one who is a natural gas company under the Act, to secure a certificate of public convenience and necessity as a condition to the construction and operation of facilities subject to the jurisdiction of the Commission. Now, I am not going to ask you to construe the Natural Gas Act. That is a matter of law—

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A. (Interrupting.) Thank you, sir.

Q. (Continuing.) —and for the purpose of this question, I am going to assume that the Commission does have the power to require those engaged in the gathering and processing of natural gas, if they are natural gas companies, to secure a certificate of convenience and necessity prior to the installation of facilities to gather and process gas. On the basis of that assumption, if it be correct, would the exercise of such power by the Federal Power Commission conflict with the efforts of the Railroad Commission of Texas to conserve natural gas, particularly casing-head gas which the Commission has required in the past in certain cases to be utilized and which the Commission will probably require in the future to be utilized in additional cases.

MR. McALLISTER: I haven't any objection to the question except Mr. Sparks has used the Commission in

relation to the Federal Power Commission and the Texas Commission. I think may be it is clear.

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PRESIDING EXAMINER: Do you understand the question?

THE WITNESS: I'll have to restate the question as I understood it and see if that is correct and then that possibly would clear up any conflict. I got a little bit lost, but my understanding was you have asked me to assume that the Federal Power Commission has the authority to require a certificate of convenience and necessity before any extension to the gathering facilities of an interstate pipe line can be built.

BY MR. SPARKS:

Q. Or before an extension to the gathering facilities of a gatherer of natural gas. A. I see.

MR. McALLISTER: Why can't we define those facilities, just say all facilities, pipe line, gasoline plants and what-not?

THE WITNESS: Let me try it this way, if the Railroad Commission of Texas issues an order requiring certain casing-head gas to be utilized and if the nearest pipe line to that field where the gas is now being flared and we are ordering it to be utilized is a pipe line under the authority of the Federal Power Commission, and I haven't said what it was there, assuming

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it is under the authority, and if the Federal Power Commission has to grant a certificate of convenience and neces-

sity before this pipe line can comply with the Railroad Commission's order and take the casing-head gas, would that be a conflict. That is my general understanding of the tenure of the question, is that substantially correct?

BY MR. SPARKS:

Q. If it would require a certificate of public convenience and necessity from the Federal Power Commission to gather and whatever else was required to process the gas—
A. (Interrupting.) There would exist a conflict—well, I am about to say there would be a conflict if a conflict existed, which isn't a very sensible answer, but if anything interfered with our authority to get that gas that is being wasted utilized, then it would be a conflict, and if the company we were ordering to take that gas would say, no, I can't do it, I've got to get a certificate of convenience and necessity from the Federal Power Commission, why, then there would be a conflict.

* * *

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Q. (Interrupting.) Let's assume there is gas flared in the field. A. All right.

Q. And that to get that gas to the gasoline plant would require the laying of additional gathering lines or perhaps the construction of an entire gathering system— A. (Interrupting.) That is very commonly the case.

Q. Certainly. Now, in such a case, if it were necessary to secure a certificate of public convenience and necessity from the Federal Power Commission before that gathering system could either be extended or constructed, then would not that interfere with the orders and carrying out, your

seeing to the performance of the order, that the gas not be flared? A. Very definitely. If anything kept us from requiring the gathering system to be built, these wells where the gas, oil wells where the gas, is being flared, from being connected to a processing plant and it in turn being put in a pipe line, anything that interfered with our doing that would be a conflict with what we presume to be our exclusive field of authority and

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would be in conflict with the attainment of conservation.

* * *

Q. Even if the Federal Power Commission in such a case should grant to the gatherer a certificate of public convenience and necessity, if an appreciable time were consumed in the securing of such a certificate by the gatherer, would not that contribute to waste and conflict with your enforcement of your order? A. Yes, if we issued, say, now, we issued the order today and it would be effective July 1, that you have to have this gas being utilized or maybe I'd better say August 1 or September 1—

Q. (Interrupting.) You have issued them on shorter notice than that? A. Oh, yes, we sure have.

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Q. Considerably shorter? A. That is right.

BY MR. McALLISTER:

Q. And longer? A. That is right.

BY MR. SPARKS:

Q. Some 17 of them on two weeks notice, I might

state. A. Well, we considered we had given them quite a bit of advance notice, although frankly I did take issue with my colleagues, I wanted to give more time interval. My colleagues took the position we had been holding hearings over a year's period of time and they didn't need any more warning. If we order on a certain date, soon or far off and that date comes around for compliance with our order and the Federal Power Commission hasn't yet given authority for the construction of these lines, then we have reached an impasse and have a conflict.

PRESIDING EXAMINER: Have you had any such instances so far?

THE WITNESS: Not to my knowledge.

BY MR. SPARKS:

Q. To your knowledge has the Federal Power Commission ever taken jurisdiction over a producer and gatherer of gas? A. No.

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Q. I believe you stated that under proration of gas, where the indicated market demand from the fields was prorated among all of the wells in the field, on a proration formula adopted by the Railroad Commission and calculated to equitably distribute

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that allowable among all the wells, that if there were more than two or more than one takers of gas from the field it would be a remarkable coincidence for any of the nomi-

nators of gas to have allowables assigned to the wells connected to that particular company's pipe lines which would equal, exactly equal, its own market demand. Do you recall that testimony? A. Yes, I so stated, and I think Mr. Baumel more adequately explained that fact yesterday.

Q. That is right. And in such cases ordinarily a particular taker either is connected to wells which have allowable assigned to them, which either is in excess of or less than the market demand of that particular taker of gas? A. That is correct.

Q. With the result that under proration in order for each taker to have such supplies of gas to satisfy his market demands over a period of time, which, of course, takes into consideration the possibility of overproduction for a short period of time, it is necessary that there be interconnections so that those who are short on allowable can receive the gas of those takers whose connections are long on allowable, isn't that right? A. Yes. That is true today, and it is going to become more and more—I was going to say more true, that is poor philosophy—it will be necessary to have a greater freedom of interchange in the future than exists even today and eventually

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it will have to come to the point as now exists with oil, where no company is able to produce or gathers from its own connections just what its demand is, but there is a free exchange between the different companies. The oil is all at the same price, the same grade of oil, and they are not worried about whether it moves into intra or inter-

state commerce, so they just swap it back and forth freely and that is very essential and it is going to have to become essential in the gas industry.

Q. Has the Railroad Commission of Texas found that producers and gatherers who do not operate these long interstate pipe lines have been reluctant to sell their excess allowable in such cases to the interstate pipe line companies which were short on allowable? A. Oh, very definitely. I mentioned that yesterday, I think.

Q. In your opinion, if it is ultimately held that producers and gatherers of natural gas who sell such gas to the interstate pipe lines are natural gas companies and their contract sale prices are subject to regulation by the Federal Power Commission, will the Commission's difficulties in inducing such producers and gatherers to interconnect so that the pipe line companies who are short on allowable will receive their proportionate part of the total market demand from the field be increased?

MR. McALLISTER: I object, Mr. Examiner, there is no

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testimony here that the Railroad Commission of Texas has or exercised authority to require those companies to interconnect.

PRESIDING EXAMINER: Well, I think perhaps the question is unfortunately phrased, but I think if the witness understands it he should be permitted to answer.

Do you understand the question, Mr. Murray?

THE WITNESS: Might I ask the reporter to read it back to me, please?

PRESIDING EXAMINER: Yes, read the question.

(The question was read by the reporter.)

THE WITNESS: I believe I understand it.

PRESIDING EXAMINER: All right.

THE WITNESS: Yes, the difficulty would greatly be increased. I have previously stated that there was a considerable reluctance on the part of some and outright refusal on the part of other companies to tie into any pipe line that was under the jurisdiction of the Federal Power Commission for fear that by tying in they themselves might be subjected to the control of the Federal Power Commission.

To me, possibly I was naive in that, but it has been very real to these companies and it has been a very definite barrier, as I think I pointed out yesterday, to attainment of conservation and to the attainment of equitable correlative withdrawals between various wells in a field and various fields. If the presumption you made should become an actuality, then what I

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have felt was an unnecessary fear would become a reality then and they wouldn't be scared of what might happen, they'll be dreadfully afraid of what has happened. On the other hand—this is not responsive to your question, but if I am permitted to volunteer this statement—I feel, and this may be wishful thinking, but I feel that there likely will come from the Federal Power Commission, maybe as a result of this case, a refusal to move in and take control of certain fields that they may feel belong exclusively to

the Railroad Commission. I wishfully think, but I think there is a very strong probability that out of this very case may come a relief from those fears that is such a handicap for the attainment of conservation today. The Commission may clearly say we are not going to take jurisdiction of certain things or Phillips or something like that, and repeatedly I have been asked about whether or not conflict exists or could exist and under the assumptions it would very definitely exist, but I by no means feel that it is necessary that there be conflict between the Federal Power Commission and the Railroad Commission nor do I believe that when we have a clearer understanding of these things a conflict will exist and that instead we will cooperate and work together as partners on these matters.

BY MR. SPARKS:

Q. Do you mean that if the Federal Power Commission takes jurisdiction over Phillips Petroleum Company as a natural gas

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company and over other producers and gatherers and regulates their sale prices insofar as their sales are made to interstate pipe line companies, that it will not have any effect on our —A. (Interrupting.) Oh, by no means.

Q. Conservation program. A. By no means, but the Federal Power Commission hasn't said they are going to take jurisdiction of Phillips, have they? They are simply holding an inquiry. We have this thing happen on railroad hearings constantly. We set a matter down for hearing and panic exists among the industry. Simply because we are holding a hearing on the subject doesn't mean we are

going to do it. It means we are simply making an inquiry into it. The things they get panic stricken we are going to do, as soon as we develop the hearing, we relieve their fear. I sort of feel that that is what is going to come of this. I share the concern that if things that the Federal Power Commission is inquiring into became an actuality, I realize a conflict would exist, and in answer to your question, and I have drifted away from it, very definitely, I can be specific, if the Federal Power Commission should take jurisdiction over Phillips, it would prove the point that these companies have been alleging fear before, it would prove us of the Railroad Commission wrong, and we'd find it next to impossible to get further conservation measures, where we needed to put gas into interstate pipe lines, but I don't consider that an actuality and to me it may be

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you will say it is wishful thinking—I don't believe that out of this hearing will develop a thing that will interfere with the authority of the Railroad Commission.

Q. I don't either, Mr. Murray, but I just want to be sure that your statement of what you thought was going to exist was predicated on that— A. (Interrupting.) I hope my statements were clear there.

Q. Your last statement makes it clear. A. To repeat now and this supersedes all my other answers, specifically to your question, the answer is yes, it would create a great deal of additional concern and interfere gravely with our ability to get flare gas utilized and with our ability to

provide for ratable take from all wells and all fields alike. Did that finally specifically answer your question?

Q. Yes, sir.

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MR. McALLISTER: The authority to fix the price to protect producers ought there not also be an authority to regulate the price, a maximum price, for the production of consumers in consuming states. I think that is the question I put to you.

THE WITNESS: That was my understanding, if you are going to set a minimum price, shouldn't you also set a maximum price.

MR. McALLISTER: I mean the authority exists when the necessity arises to protect the consumers in consuming states.

THE WITNESS: My answer was I didn't think we now had the authority, we meaning the Railroad Commission of Texas, now have the authority or should have the or desire it, that if we are given that authority, I would have no idea as to what other authority would tie in with it and responsibility, but in my own opinion I agree with counsel that if it is reasonable to set a

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minimum price it would be reasonable to set a maximum price.

MR. McALLISTER: That is exactly what I understood you to say before.

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Cross-Examination by Mr. McAllister

Q. Did I understand you to say this morning, Mr. Murray, that as an abstract proposition if the Federal Power Commission took jurisdiction over Phillips Petroleum Company in any part, that that would interfere with your conservation program in the State of Texas? A. I believe the questions were somewhat more specific than that, and we tried to discuss, based on assumptions, but if specific things occurs and I answered if those specific things occurred there would be an interference.

Q. Yes, but the mere fact that the Federal Power Commission did find that Phillips Petroleum Company was engaged in the transportation of natural gas in interstate commerce or in the sale of natural gas in interstate commerce, that would not necessarily mean that there would be interference with your conservation laws in any way? A. I don't exactly know what finding that they are a

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natural gas company means or what it would result in but simply making a finding, if it wasn't followed up with some regulations, I wouldn't see—

Q. (Interrupting.) Well, if regulations did follow it would be those regulations in specific instances that would bring about or work the conflict, let's call it, with your conservation authority, and the exercise of that authority? A. That is correct. It would be the specific regulation. Now, it is difficult for me, and I readily want to admit that I

am not acquainted with just what is involved in declaring the company a natural gas company, but it is difficult for me to understand why the Federal Power Commission would have any desire, if they do, and I certainly recognize or so understanding that they have officially indicated no desire, they are just having a hearing to go into the matter—

Q. (Interrupting.) Yes. —but I cannot understand why they would ever take jurisdiction, except in anticipation of issuing certain regulations.

Q. That is right. A. And the only regulations I can conceive of would result in actions that would be in conflict. Now, maybe—

Q. (Interrupting.) You think that? You think there would be that conflict? A. I may be completely in error. None of the types of

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regulations that we have discussed might result, but knowing no more about the Federal Power Commission's intentions or responsibilities than I do, my presumption has been and it is purely a presumption that if they did take jurisdiction it would be for the purpose of issuing regulations of the sort that have been described to me in these questions, and if those regulations of that sort were issued, I do believe that conflict would result.

Q. In other words, your answers were not general answers but the specific answers to the questions you had before you at the time you made your answer? A. Yes, sir; even though they were making specific assumptions,

they were still rather general, but not so general as to say if the Federal Power Commission takes any jurisdiction over Phillips would a conflict result, and I never did intend to say any jurisdiction would result.

Q. You mean any conflict would result? A. That is right, if they took any jurisdiction, but I can't quite conceive, I may be in error, of what jurisdiction they would take over Phillips without conflict resulting.

Q. Are you familiar with the Canadian River Gas Company at all? A. I am familiar to some extent, not intimately.

Q. You know that they produce gas, do you not? A. Yes.

Q. Large volumes of gas? A. Yes.

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Q. And they operate gasoline plants? A. Yes.

Q. And they have gathering systems? A. Yes.

Q. And they operate under your proration law? A. Well, they try not to. They have a suit on with us right now saying we are above any proration order issued.

Q. But you did exercise authority over them and did force them in 1949 and '50 to close in wells? A. Yes, sir.

Q. And— A. (Interrupting.) No, excuse me, we didn't force them to close in wells, I don't believe. We prevented them from getting all the gas they wanted to get from the wells.

Q. There may have been some wells closed in, you don't mean to say there were no wells closed in during that time during the period?

MR. BAUMEL: Not under the Commission's orders.

BY MR. McALLISTER:

Q. Well, you closed them down and required them not to exceed the maximum you fixed? A. We fixed an allowable which was less than the amount they wanted to produce.

Q. And they observed that rule? A. So far.

[3766]

Q. So far? A. Yes, sir. I mentioned that yesterday. They went into federal court and then they filed it in district court and I am not exactly acquainted with where the case is now.

Q. I mean to say you know that Canadian River is a natural gas company under the jurisdiction of the Federal Power Commission, is it not, and has been for a number of years? A. That is my understanding. I understand they have a long interstate pipe line.

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[3767]

Q. I mean to say now, the next question is has there been any interference by the Federal Power Commission which impaired your ability to conserve or enforce your conservation laws by reason of the fact that they had jurisdiction over Canadian River?

[3768]

A. Well, it hasn't been realized, but it has been alleged and we seriously concerned ourselves about our authority

to do what we thought was necessary to preserve equity in the Panhandle. We waited a long time, I don't know whether that is a fair answer or not, because the thing is still under litigation, but we were told and we worried a lot about it, whether or not there was interference that has been realized, I can't say there has been any.

Q. The position taken was by the gas company, by Canadian River? A. Primarily, yes.

Q. Well, and who else? A. Well, producers and counsel would come—now, we just are worried about your authority and all like that. I am possibly answering out of turn. You get a lot of friends of yours coming in and advising you on things that are not supposed to be related to the particular company in question, and we had other people who said, look, I'm just a bystander and you are going to run into this, that and the other, and we were not sure they were doing that for Canadian River or on their own, but other people were counseling with us as to what our authority might be, not Federal authority.

Q. But the Federal Power Commission did not at any time

[3769]

intervene in the case or question your authority to do what you did? A. Not to my knowledge.

Q. Well, you would know if they had? A. I believe I would.

Q. And your primary order which was in question was the establishment or proration and limitation upon Canadian River as to the volume of gas they could produce

from their then existing wells, isn't that right? A. That is correct, yes, sir.

Q. That is the genesis of all your conservation authority, isn't it? There is a lot of exceptions but that ability to control production is the basic root which supports your efforts to conserve gas and oil? A. If I understand the ramifications, I could say yes.

Q. Well, of course, there is the other thing about physically blowing it in the air, that is another one? A. You are simply saying that that is one of our principal tools for exercising our conservation authority and that is to control production. It is not the only one, we both agree but it is a major one.

Q. Isn't it a basic and fundamental one? A. I would think so. It is certainly one of the most basic ones and I think of none at the present that is more basic.

[3770]

Q. Another one would be, if there is another one of equal magnitude, it would be your power and authority to prohibit production of oil or gas or oil and gas if the product is not for some useful purpose? A. Yes.

Q. The Panhandle Eastern Pipe Line Company operates a number of wells and produces gas in the State of Texas, does it not? A. Yes.

Q. And that you know also is a natural gas company? A. So I have understood.

Q. And there has been no time when the exercise of authority by the Federal Power Commission over Panhandle has interfered with your conservation authority in

the State of Texas, has it? A. Not to my knowledge, and I believe I'd have knowledge if it had.

Q. And Panhandle, in the course of their operations, must produce the gas from the wells it operates and gather it into its lines? A. Yes.

Q. The Cities Service Gas Company also operates certain gas wells in the State of Texas, does it not? A. Yes.

Q. And it also gathers that gas and brings it into its lines, does it not?

[3771]

A. Yes.

Q. Do you know of any instance where the fact that they are well, I should ask the other question. You know they are a natural gas company under the jurisdiction of the Federal Power Commission do you not? A. I'd have to honestly say no I don't. It probably should be a matter of knowledge of, but I just haven't had occasion to inquire into it.

Q. Well, I can state affirmatively that they are— A. (Interrupting.) I have no question of it. You asked me did I know it and I had to honestly say no.

Q. Well, it is supported by decisions of the Federal Power Commission and the Supreme Court of the United States. And the exercise by the Federal Power Commission of its authority over Cities Service Gas Company as a natural gas company has not, has it, interfered with the full exercise by you of your conservation powers and authority in the State of Texas? A. You know, there are different Cities Service companies, and I don't—

Q. (Interrupting.) Well, this is the gas company, there is Cities Service Oil and Gas companies. A. Do you have authority over the Cities Service Oil Company?

Q. Not that I know of. A. That is the one I know most about and I have never run into anything where the Federal Power Commission had exercised

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their authority. It would perhaps be helpful for me to admit my limitation of knowledge. I am reasonably conversant with companies operating over the State of Texas but my knowledge in the Panhandle is most limited, and unfortunately, I guess, that is where knowledge is being most needed, but if you would question me relative to some of the pipe lines going out of East Texas and Gulf Coast and South Texas, I believe I have a better knowledge there. It is unfortunate that I have never worked in the Panhandle. Most of that was developed years ago before I worked for the Commission or came to the Commission, and I just knew the Canadian River and Panhandle Eastern were all gas companies for a long time, but we have never had any real issues up there and where I am more conversant, if you could illustrate the point of something that is taking place in Carthage and some of the fields along in there, I possibly would be better qualified to answer.

Q. I mean the application of the law in East Texas would not be any different— A. (Interrupting.) I wouldn't think so, and I have a better knowledge of the situation. It would make no difference except I wanted to admit my embarrassment at not being better acquainted with the Panhandle companies.

Q. Are you familiar with the Lone Star Gas Company?

A. Reasonably.

Q. You are familiar with the fact that they operate

[3773]

gasoline plants, are you not, for processing the gas? A. Yes.

Q. And that they have a gathering system by which they collected gas for processing in these plants? A. Yes.

Q. Are you familiar with the fact that the Lone Star Gas Company is a natural gas company under the jurisdiction of the Federal Power Commission? A. Yes.

Q. Has the exercise of that authority by the Federal Power Commission over Lone Star Gas Company in any way interfered with the efforts of the Railroad Commission of the State of Texas to enforce its conservation laws and authority? A. No, and to my knowledge the Federal Power Commission has never exercised authority down to the field of production. Now, I think that Lone Star, there is a separate production company. If they have production it is called Lone Star Producing Company or something like that. Do you exercise jurisdiction over Lone Star Producing Company?

Q. I don't think so. A. There is where my knowledge of production—there has never been any interference and I have never presumed that in the field or production that the Federal Power Commission assumed any jurisdiction.

* * *

[3777]

Q. If with respect to Lone Star Gas Company, Panhandle Eastern Pipe Line Company, Cities Service Gas

Company and other—well, those three, there could be others, but I'm not going to

[3778]

name them, if with respect to those companies which are natural gas companies and subject to the jurisdiction of the Federal Power Commission, there are also other companies whose operations in part parallel the operations of the three companies which I named, would you say that because they may be doing other things, directly subject to your jurisdiction, that the Federal Power Commission should not exercise jurisdiction over Phillips and other gas companies or petroleum and oil companies, simply because they are under your jurisdiction in one respect but carry on operations parallel to those which are under the jurisdiction of the Federal Power Commission and exercised by the Federal Power Commission in relation to Lone Star, Cities Service, Panhandle.

* * *

[3779]

A. I am not able to draw the line or have knowledge of whether the parallelism exists or not, but if for example Phillips under its name and identical corporate ownership had a pipe line, we will say, going to Chicago, that portion of their operations consisting of this transmission line taking gas to Chicago, I'd say, would be under, should be under, the jurisdiction of the Federal Power Commission, and that part of their operations which we think of as being their principal operations, I don't attempt to say

where one starts and the other stops, I am not intimately acquainted with their operations or with the law, but that part of their operations which down in Texas we think of as being the primary function of Phillips, that is, producing, gathering, processing gas, in the state, I'd say ought not to be under the Federal Power Commission's operation. I have assumed something that doesn't exist, but to the extent that the equivalent exists, I would answer your question. If they had a pipe line to Chicago and were engaged primarily in the transportation of gas through it, I'd say that ought to be under the Federal Power Commission. Just like I say that if Lone Star Producing and Lone Star Gas merged, then the Federal Power Commission should continue the same regulations over the merged company that we now enforce and there is no conflict that I know of.

* * *

[3781]

Q. If the Federal Power Commission has jurisdiction over Lone Star Gas Company in relation to certain of its operations, is there any reason why a like operation on behalf of Phillips should not also be under the jurisdiction of the Federal Power Commission? A. Let me try this answer. I don't ask, the Railroad Commission of Texas doesn't seek, for Phillips to be treated any differently from any other company under similar circumstances. We are not here intervening or whatever we did to get into this case, in behalf of Phillips, and it is not fair to tie Phillips to us or us to Phillips. I imagine we have three or four lawsuits with them going on at the present time, and we

don't stand in identical position here. There is actually probably more parallelism with the position the Federal Power Commission is in and the Railroad Commission, than between the Railroad Commission and Phillips. We are intervening because we object to a principle, not that it has been accomplished or that we have any belief that the Federal Power Commission is going to step in, but we did feel that the time was proper for us to come and voice to you, not that we thought you were threatening to do it, but voice to you, our concern if the

[3782]

Federal Power Commission should step into these fields and we are not doing it in behalf of Phillips. We do the same thing in behalf of—if you were trying it on Humble or Magnolia, or the littlest independent, and our position would be the same, and we don't wed ourselves to all the stands Phillips takes and certainly won't feel it fair for them to be in any way held responsible for any statements or admissions I would make or any other witness for the Railroad Commission, so my final answer is, we don't seek for Phillips to be treated any differently from anybody else. We do earnestly hope and trust that the production and gathering of gas in the state will not be subjected to regulations by the Federal Power Commission.

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[3785]

Q. You said something this morning, Mr. Murray, about the fear and panic that sometimes overcomes individuals

when a matter is set down for hearing, and at the same time in another connection you stated that there was reluctance and even refusal on the part of some large producers of gas or large—yes, large producers of gas, to make sales or deliveries of gas to an interstate pipe line in the East Texas Field, I think we were talking about at the time. Do you recall that? A. Yes. I didn't intend to be specific as to the field, because that has been true all over the state.

Q. Yes. Well, now, do you believe, as a member of the Railroad Commission, that reluctance or refusal on the part of individuals to make sales should be so considered that it would govern the exercise by the Federal Power Commission of regulatory authority which it has? I mean, in other words, a sitdown strike by the industry should not be a deterrent to the carrying out of obligations established by statutes, should it? A. No, the fact that the fear of Federal Power Commission encroachment causes failure to prevent waste of gas shouldn't, I didn't mean to imply that simply because

[3786]

some operators are scared of the Federal Power Commission you ought to just close up shop and not do anything. The question was whether or not this could cause further waste, and I answered in the affirmative that it could, a further encroachment, advancement, extension of the Federal Power Commission authority. I think simply the Federal Power Commission carrying on the functions that are — well, I am about to draw a conclusion myself. I don't mean to do that.

Q. That is all right, go ahead. A. If you carry it on the functions that in my judgment are necessary and needful in the best public interest, there needs to be no conflict with the state regulatory authorities and no reason for this fear we are talking about. I don't expect you, because some people are scared of you, to close up shop. But I did answer in the affirmative that any advancement, any reaching out, to the fields at least in our opinion, the Federal Power Commission, if you should step in that field, which I have no belief you would, then I did agree with the question that it would greatly enhance the fear and greatly interfere with our accomplishment of conservation.

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[3791]

Q. You do admit and recognize, do you, that gas is on short supply right now in Texas? A. Large quantities of gas conveniently located is definitely on short supply. At least, we've got so very much of it committed, dedicated, to these out of state pipe lines that we can't find it for our industry here in Texas. The legislator made a speech in the Texas legislature last week decrying that situation. Here these industries couldn't find the gas. He said what does our Railroad Commission do? They sit up and look at the window. We were castigated for failing to take a stand. What could we do? Would it do us any good to come up here and protest to the Federal Power Commission or could we issue an order saying don't take the gas out of Texas, we need it here? The only answer I know is let everybody compete for it and if it gets in short supply, the price will go up and that will encourage us to find more of it.

Q. You admitted there must ultimately be an end to the gas supply? A. There ultimately will be an end to the oil and gas supply. It is a finite quantity. When that end comes depends on the development because up to now we have been hustling and

[3792]

and finding reserves by keeping pace with our rate of consumption. If every foot of gas ever to be discovered was now discovered, then we could sit back and say, oh, we'd better lock this up, save it for our needs or Wisconsin's needs or so forth, but we know we'll find a lot more gas, and so the freedom of these companies to get out and hustle on their own and find gas and sell it where they can get the most for it is what makes this economy in America click, and that is how come American companies here have found so much oil and gas and have been the principal cause of finding it abroad, because they were free to work, and you get a condition like you have in Mexico or any other country of the world where you have all these federal regulations and restrictions and you don't find any gas. They fix the price low, but they don't sell any because they don't find any to sell.

That, substantially, is my philosophy on this thing, and I am unpopular in Texas just as I might be unpopular in Washington here, because I take the stand we oughtn't to try to stop this export of gas, even though I possibly have as much vision and have been pointing where our industrial future lay as long as any one. I have been telling what we could do with gas, that Texas could be one of the

most popular states in the nation and could have the brightest industrial future of any area in the world if we do keep our gas, and still I'm sitting looking at the window they say down in Texas while we run this gas up to Detroit and Chicago and Wisconsin. We'll have to go

[3793]

pick our fuel up off the prairie some of these days and we'll be a bankrupt state when the gas is going up there, yet I don't know of any way within American system of free enterprise to keep the people of Wisconsin from having our gas when they come down and buy our gas, and I think it is fundamentally wrong for a plant to come down here and want Texas industry and want the gas—by golly they ought to have the right to do it.

Therein is our whole protest on this thing, Texas is a tremendous state and if there is any particular favoritism, any presumption of it, for Phillips, I want to disclaim that. We don't want them to be treated any different from anybody else.

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[3798]

Q. And that gas is processed through what plant, the Crane Plant? A. It is the Crane plant, yes, sir. It is the sourest gas we have in Texas, so we are awfully proud to get it utilized.

Q. Yes. The utilization of that gas was made possible primarily by the construction of these interstate pipe lines, is that right? A. I think I can answer yes either way. I was volunteering about McElroy. So if I talk specifically

about it, there was no other market for gas from McElory, save the

[3799]

El Paso Natural, and so if it hadn't been for the El Paso Natural, an interstate pipe line, at this time there would not exist any market for that gas. I want to pay full credit for that, and that same is true of a good deal of the sour casing-head gas that is being utilized in West Texas. El Paso takes a larger percentage of casing-head gas than any other company, and if it were not for that interstate pipe line and for their willingness to take casing-head gas, unless—I mean they did it willingly, we might have done it through order, but if it wasn't for their facilities a lot of the casing-head gas we are currently saving in East Texas, would be still flared. Did I pay good enough tribute there, because I have it in my heart to do it there?

Q. The point I was making was not that the interstate pipe line has any glory coming to it but it is just a question of this casing-head gas finding a market since it must be produced in connection with oil. The point I was making with that generally there was no other market for that gas from the Crane plant, that I know of? A. I know of none either. And that is just as extreme example that I can think of. Some one might say why are you letting all this West Texas casing-head gas go out of the state and clear to California, why didn't you save it for Texas industries. Here is the opposite of

[3800]

that argument I was presenting a while ago. That gas was

being flared. So you see, you have to look at this thing from both sides to see the whole picture.

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[3822]

Q. Is that true? Couldn't you permit the allowables in the Texas-Hugoton without regard to the allowables in other

[3823]

gas fields in Texas? Isn't this treated as a separate unit by itself just as if it was a separate state? A. That was the point I tried to make yesterday and this morning and it may have seemed I was going rather far afield in how we did oil. We are headed towards doing the same thing in gas that we do in oil, and have soon, and I'd like to try and give everybody full notice of that, we don't want to suddenly do it, we are trying to do it gradually, very soon we will pay no attention to the demand for a particular field, we'll just add up the total demand for gas from the state and distribute it to all the fields in the state, and the reason I keep coming back to oil, is because you can see in oil what we are going to do in gas, we've got to do in gas.

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[3835]

BY MR. TULANE:

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[3836]

Q. At this time, then, you cannot name a field to which Michigan-Wisconsin could go and bargain for eleven billion

cubic feet of gas? A. You can go to any field and bargain for it. I cannot give you a field where you can get the gas at your price.

Q. Within the realm of economic— A. (Interrupting.) It is economic for you to go over to the Panhandle field. You are right there, adjacent to you.

Q. Is your opinion based on your knowledge that there

[3837]

are eleven billion cubic feet of gas a month available there?

A. There is a whole lot more gas than that available. I don't know whether you'd get it or somebody else would get it.

Q. Is there that much gas on the market, at the present to be bargained for? A. There is much more than that gas on the market. Now, I don't know whether you'd get it or not. That is where I can't say who is going in this free competition to get the gas. I'll try to answer your question. I can't name, what is it, eleven billion a month, eleven billion in a package that is just sitting there waiting, nobody taking it, just waiting for you to come and ask them would they like to sell it to you. I can name some fields where there is gas that nobody is taking and it wouldn't be practical in my judgment for you to go after it, and I know there is many times eleven billion a month produced in the Panhandle field. That is available to somebody.

Q. Is it not true that the available production down there is all being marketed right now? I am referring specifically to the West Panhandle. A. It is bound to be. That has to follow. That is what we allow to be produced is what is being marketed.

BY MR. SPARKS:

Q. And if the market demand, Mr. Murray, was increased,

[3838]

then the allowables would be increased commensurately, would they not? A. That is right. If you go in and nominate for additional gas in the Texas Panhandle we'll raise the allowables up, but you may not get it. It may go to these other people. We don't say, fellows, you all have to give Michigan-Wisconsin eleven billion feet. We total up what everybody wants and then it is up to everybody to hustle for it to get it. That is a pretty vicious game. This competitive system is pretty hard-boiled, and it kind of works hardships sometimes. Lots of times we think we'd a lot rather have somebody leading us by the hand and telling us what we want and what should be paid for it, but in a free economy it doesn't work out. I take no objection to price controls in a time of emergency like now. I'm ready for them to put price controls on anything. But outside of emergency I don't think anything should be controlled in price where there is freedom of competition for it. I think the consumer benefits mostly there. Did I ever answer your question? No, I do not know where I can guarantee you you could get eleven billion feet of gas, but if you could go into the Panhandle field and show a demand for more gas we would increase the allowable from the Panhandle field but we wouldn't tell anybody that they had to sell it to you.

[3839]

Q. Then they'd have to build sixty to seventy miles of pipe line of the same type as the one going up north in order to connect that gas? A. Unless other facilities already existed. We have done a lot of assuming. I haven't said we are going to cut you off from the Texas-Hugoton. I don't see why we would presume that, but if the Texas-Hugoton field is producing more gas than it can produce without wasting, or if it is producing more than the fair share of the total market and because Texas-Hugoton is producing so much there is gas being flared elsewhere in the state that could reasonably be made available to the market—remember, we had an illustration a while ago of Company A, and Producer B. Company A was flaring the gas and the purchaser was taking the gas well gas from the field. I said we could cut down on the gas well gas production so that they'd have to take this flare gas and if this doesn't exist, the whole situation of any trouble, then, with regard to this is an assumption. If there were an oil field right close at hand where a lot of gas was being flared, casing-head gas, and because you preferred to get your gas from Phillips in Texas-Hugoton and Phillips preferred to sell you their Texas-Hugoton gas instead of flaring gas over here, we'd step in and say you can't take it out of Texas-Hugoton. I have amply, to the best of my ability illustrated

[3840]

why I think that is in the best interest of everybody, but I also have not meant to imply that anything is going to happen to it, but if we have authority to run this state

in the best interest of the consumers of Texas and the nation, we have to have authority to tell where gas can be produced and you can't feel you have a vested right and can also require us to allow whatever you want to be produced from the Texas-Hugoton, whether that fits in with preventing physical waste or correlative rights or not. Maybe you can, but if you can, then there is a serious conflict with our authority.

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[3854]

BY MR. SPARKS:

Q. What do those separators do? A. That is to extract the liquid content.

Q. Condense it? A. Yes, sir. There are two reasons, it is not advisable for that liquid to go in the pipe line, and the other reason is we order it done because the royalty owner is entitled to his share of those liquids and we make them put separators on gas wells, they recover the liquid, run it through a liquid meter, measuring the volume and then throw it right back into the common stream and take it on to the gasoline plant but that gives you a pressure amount of how much liquid is recovered. I didn't answer your question because I can't say where production stops. On a gas well, like I guess in Texas-Hugoton, that gas is dry and everything is all right to start with. You can take it out of the well, I guess, and run it right into—

BY MR. McALLISTER:

Q. (Interrupting.) A gasoline plant? A. Yes. And there could be cases where it would be in such good shape where you wouldn't need to run it through a

[3855]

gasoline plant, you can put it in the pipe line.

Q. That is thrue over in the Monroe field? A. So production would stop there when you got it out the well, but then there are cases where you run it through three stage separation and on through a gasoline plant and you haven't got it ready for the pipe line until you run it through all of that. I consider all of that part of the production operations until you get it ready to deliver into a pipe line, until it is in marketable condition.

Q. Where does gathering begin, then? Is that after you get it produced? A. Yes, sir; although we generally look to the gathering as part of production.

Q. You take a proposition of this kind, you take a gasoline plant and supposing the gas is delivered into a interstate pipe line and is moved for a distance in the interstate pipe line and then is processed. Under those circumstances where would gathering be completed? I mean do you have gathering and then you have transportation and then does it go back to gathering again while it goes through the gasoline plant? A. We have a lot of cases where you process the gas, you gather it, you run it through your lease separators and you gather and run it through a field plant.

Q. A gasoline plant? A. That is right. Then you put it into a pipe line and

[3856]

run it on down away and run it through another plant. I consider, and there has never been any occasion for us to make a legal decision, so I don't presume to speak with

any authority, so I presume, I consider, when you get it through the first processing plant, that that is when the production and gathering ceased, then if you do more processing down the line that is part of the transportation system.

Q. When you flare gas, has it been processed before it is flared? A. Some of it.

Q. I mean flare out of a gasoline plant? A. That has been processed, yes, sir.

Q. Where does the processing end? Do you have to carry it a given distance after you get it processed before you have completed it? A. The residue, where we have had large flares has been on the residue line from a gasoline plant.

Q. Yes. A. We have some flaring that way right now. That gas has been completely processed and it is ready to go in the pipe line and part of it does go into the pipe line but at times the pipe lines can't take it all and so it is flared, so the gas that was flared is just as thoroughly processed as the gas that went into the pipe line.

[3857]

Q. I show you paragraph 8 of Exhibit 135, and I call your attention to the words, the paragraph starts:

"That approximate 21.941 million cubic feet of natural gas that is being flared daily from the gas processing plant here involved has already been gathered and processed".

Now, gathering according to that statement, it seems to me, is employed as being completed as the gas goes in

the gasoline plant? A. Not as it goes in, after it has been through the plant. This is in the Fullerton plant. The gas there is gathered to the plant, processed and gas being flared. Part of it was flared, and part of it was put into El Paso's lines.

Q. Yes. A. As I previously stated, I make no attempt to legally define all these things.

Q. No, I am asking practically from your thinking. Frankly when it goes through the Fullerton plant, whether out a flare line or into El Paso's lines it has to be processed and gathered and El Paso takes over on the transmission. Then you can't separate processing and gathering, is that right? I was trying to distinguish between the terms process and gather. A. I think of gathering as bringing it into the plant

[3858]

and processing is what you do to it.

Q. That is what I thought also. A. They are all tied in together.

Q. They are all tied in together. Just as transportation goes on beyond, they are tied together. A. That is right. One acts right after the other.

Q. You gather it, process it and then transport it to market? A. That is correct, although you sometimes produce it, and of course, it is all part of production and you do some processing right on the lease.

Q. That is right? A. Then you do some more gathering.

Q. That is right. A. Then you do some more processing.

Q. Then you may transport it and do some more processing? A. That is right.

Q. If, as a matter of fact, gas is assembled in one field and it is transported across country to a gasoline plant in another field— A. (Interrupting.) Excuse me. Possibly we have a specific illustration in this Shafter Lake we have been talking about. I didn't mean to interrupt but that might give you a specific illustration to question about.

[3859]

Q. That is right. A. It is produced in Shafter Lake and taken over to Fullerton to be processed.

Q. That is right. That may be transportation from one field to another as distinguished from gathering? A. Well, of course, gathering is transportation. I am a little at a loss—if we define the terms and I could tell you within those definitions which we were doing, but I have never stopped to define—in the process of gathering, you have to transport.

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[3861]

Q. I appreciate that, and I understand that, Mr. Murray. In discussing the question of conservation this morning you referred to the price of gas. Were you considering there the price that the operator got at the wellhead? A. Yes, sir. I might possibly include the price that is paid after casing-head gas has been processed.

Q. The price of gas X the gasoline or included in the gasoline? A. The point I was making, particularly on

casing-head gas, it is whether the price is high enough to justify the gathering and processing of the gas and so I've got to look to more than just what might be paid at the well-head, but whether or not the price paid when it leaves the processing plants is high enough to pay for all these costs—

Q. (Interrupting.) What you really mean is this, that the amount that the producer and the gatherer would realize out of their total operations in collecting gas through a gasoline plant and making it available for market? A. Could I add the producer, the gathering and the processor?

Q. The producer, gatherer and processor?

[3862]

A. Yes, because it costs something to process casing-head gas particularly if it is sour. They used to say it was completely impractical to do it, but we have gotten the price down plus a little extra price that it is beginning to be practical to sweeten sour gas. So there is what I am talking about, if we are speaking specifically of casing-head gas, it is the price paid for the gas after it has been gathered and compressed and put into a marketable condition.

Q. You have to include in that to determine the economic factors you have under consideration the amount received also from the liquid content out of the gasoline plant? A. Yes, sir.

Q. It has to be the gas as sold in its final shape after being sweetened plus the dollars realized from the liquid product? A. That is right. If you greatly increase the

liquid price. I don't mean greatly, if you increase the liquid price, that will do just as much good where there is substantial liquid to be recovered as increasing the gas price. It all works together.

Q. Isn't it a fact that where there was any sizable field at all in the past, even though it was sour gas, that that was gathered and processed for the recovery of the

[3863]

liquid content only, even though the gas was flared afterwards? A. I think you said isn't it a fact that where there was —

Q. (Interrupting.) Sizable quantity. A. Would you restate your question?

Q. Wherever there was any sizable quantity of gas being produced, casing-head gas, as a matter of fact, it was gathered through a gasoline plant, the liquid recovered and the residue gas flared? A. There were plants built to recover liquids.

Q. Well, there were great numbers of them, were there not? A. Yes, sir; and in that case they were built to recover liquids. There were a great many other fields where it wasn't feasible to recover the liquids. They just flared the gas out in the field, so we had two problems, one of getting the gas flared at a gasoline plant, that had to be further processed, dried, sweetened in some cases, and compressed. Now, the gathering had already been done to get the liquid out of it, so that wasn't necessary to take care of the gathering in order to get the gas marketed. In the other cases, the gas was still scattered throughout

the field and you had to conclude the gathering of it. Does that answer your question?

[3864]

Q. It does in one sense. There is one more point, and that is sometimes the inability of the producers in the field to get together on a gasoline plant was the cause of the flare in the field and other times the volume wasn't sufficient to justify gathering and processing, is that right?

A. That is right, yes, sir, we have had delays by arguments simply on who is going to get to build the plant.

Q. What would be your practice in that regard today if they couldn't get together on building a plant? A. Well, they can shut the oil field in and have plenty of time to work out their differences or views.

Q. And you sometimes do that, but it is only after a long delay that you get around to doing that. You try to work it out amicably before you do it? A. That is the position we take. They think we are hasty sometimes, but it seems to us it has been long and there is plenty of time to leisurely work it out.

Q. But you don't know of any case, do you, where the Federal Power Commission, by anything it has done specifically in relation to a company that is a natural gas company and also produces gas in Texas, where the Federal Power Commission by order, regulation or effort, as far as you are concerned, has sought to interfere with the free

[3865]

exercise and power that you feel you should have over the production of gas in Texas? A. No, sir. If I might add, I'd like to amplify on that, because the question might be raised why we are intervening here. We don't think the Federal Power Commission is going to take an action to interfere with our authority, but if we didn't come and frankly discuss these things, just like, until I was relieved, I was fearful of your statement about dedicated reserves—that is why we are here. We are under no real apprehension that you will. We don't, for example, haven't had, any conflict with you in regulating, say, Lone Star Gas Company, and United Gas Company. If you were to be holding a hearing on whether or not Lone Star producing company or Union Producing Company were under your jurisdiction, we'd be pretty concerned, because that is something in our field, and we'd be right in here intervening in order to tell you our concern.

Here Phillips is to us like United Producing Company or Lone Star Gas Producing Company. To you, apparently, it is like United Gas Pipe Line or Lone Star Gas Company, so we have a difference of views, and I haven't looked into the details of the operations of the organization, but I think at least I try to make my point clear about what we are concerned about—

Q. (Interrupting.) Yes, sir, I think—

[3866]

A. (Interrupting.) And I had the good example with United and Union. We'll take Union and you all take United.

Q. But what I'm saying is if there is such an operation, except that instead of having two separate companies they do it all in one, necessarily the Railroad Commission of Texas and the Federal Power Commission must deal with the same corporate entity, each in their own sphere? A. That is correct. Again I think if you will combine Lone Star Producing Company and Lone Star Gas Company, then we'd expect you to keep on regulating that portion of it that is doing the same thing that Lone Star Gas is now doing, and we'd expect, without interference—we wouldn't expect to interfere with your authority there, and we'd expect without interference to do what we have been doing. I have been repetitious there, but I am anxious for you and the Federal Power Commission to understand our presence in this hearing.

Q. By that same token, you are not concerned with the authority we exercise over Panhandle Eastern Pipe Line Company, are you? A. I know of no area of conflict that has developed so far.

Q. Or Canadian River Gas Company or Texoma Natural Gas Company?

[3867]

A. No, sir.

Q. They are producers, large producers? A. This possibly is improper and please cut me off if it is.

Q. It is perfectly all right, go ahead. A. Is the Federal Power Commission regulating the production of Canadian River and Panhandle from their wells?

Q. No. We are leaving that to you. We never have

worried about it. We thought you were doing it, and now maybe we are wrong; I thought, when everybody kicked and said we were interfering—but when I get down here and talk to you, we found you were doing your job we assumed you have been doing, and we find out you are doing a good job. A. Thank you, sir.

Q. There is no thought on our part to do anything in the future than what we have done in the past. A. To specifically answer your question, I know of none, and your answer to me helps further my knowledge of the case, and I know of no conflict we have had on those companies in the particular question.

* * *

[3868]

BY MR. TULANE:

Q. Mr. Murray, are there any conservation conditions which you know of right now in the Hugoton Field which would cause you to cut down on the Hugoton allowable substantially below the nomination? A. No. I'll qualify that to the extent that they are not now getting what they nominate.

Q. I know that, but you don't know— A. (Interrupting.) I don't know of anything that would cause us to change the allowable they are now getting, but I do want to point out we are not giving them what they nominate.

[3869]

Q. Your first answer was correct? A. No, I had to qualify it. You said was there any conditions that would keep them from getting what they nominate. If they are

getting now substantially what they nominated, then I know of no condition to change it.

Q. From your present knowledge in the foreseeable future can you think of any such conditions which would arise which would cause a substantial cut-down on the allowables in the Hugoton Field? A. Subject to the general qualifications I made earlier, I can say no.

BY MR. SPARKS:

Q. To what general qualifications do you refer? A. Of how Texas Hugoton will have to in times in the future gear itself to its fair part of the total Hugoton supply and its fair part of the total Texas supply. We have come, I think, to this question "to the immediate future" and I know of nothing in the immediate future that would change the present picture.

* * *

[3872]

MR. TULANE: Today, Your Honor. If you will recall, the witness stated in substance that when a monopoly condition arose, he did not think it desirable, that he recognized that it was essential, that it be subject to government regulation. I believe you'll all recall that testimony.

PRESIDING EXAMINER: Is that your testimony as you remember it, Mr. Murray?

THE WITNESS: That is my recollection. I was speaking relative to the gas companies as domestic sales and pointed out that where a company had exclusive, shall we say, monopoly if that word is permissible, in a certain city, like Lone

[3873]

Star used to have in Dallas, there is no other company there, then I considered that that company had to be regulated by state authority, if it was purely an intrastate operation, and I would consider the same would apply on an interstate operation, that it would have to be regulated.

I didn't agree that it was desirable, I said it was undesirable and necessary.

* * *

[3919]

JACK K. BAUMEL

resumed the stand, and having been previously duly sworn, was examined and testified further as follows:

Direct Examination (Continued) by Mr. Crenshaw

* * *

[3933]

Q. I'll ask you to state whether or not if in considering the additional production for the seasonal demand it was found by the Commission that to take the gas at the increased rate would affect the reservoir and the potentials of the well, what, if anything, would the Commission do in those circumstances? A. Well, in these fields we are talking about, for instance, the Panhandle field or the Hugoton field or any other field in which there is no water drive, most of the proration we are doing is not primarily on waste, so much as protection of correlative rights, so in

fields of that type where there is a solution drive field or gas drive field there is very little waste from high rates of production. It is only in these water drive gas fields that we fix the M. E. R. as the allowable even though the market demand may exceed many, many times the efficient rate, the Commission's orders will reduce that take to the actual efficient rate of production for the field.

Q. In the event that the purchaser made nominations for an increased demand on the production in that particular field and there was no possible way to get it under the allowables after they were set, what, if anything, would be done by the

[3934]

purchaser of the producer in order to supply that demand?

A. Well, I might state this, that in accordance to the statutes for a reservoir which produces both sweet and sour gas, the statute specifically states that we, when allocating the allowable for these fields, like the West Panhandle field and the Texas-Hugoton field, we are restricted by statute to limit the allowable to 25 per cent of the open flow, so that if the market demand would increase for any of these fields to a point where by granting the allowable to each well according to the allocation formula it fixes the allowable for a well to exceed 25 per cent of the open flow, we automatically cut that back to 25 per cent, so we may reach a point in the Hugoton field or the Texas-West Panhandle field where the market demand may reach a point where it would cause all wells to be restricted to 25 per cent of the open flow. Then in that case, why, you never would be able to meet your market demand, and it would force

the pipe lines or purchasers either to interconnect with other fields in the state or not meet the market demand.

[3935]

Q. When you say interconnect, what do you mean by that, Mr. Baumel? A. I meant by that that if all the purchasers had certain market demand and they couldn't meet it from their connections, or any other connections in the field they just couldn't meet the demand or if they needed that gas they'd have to lay lines to other parts of the state to buy that additional gas.

* * *

[3939]

Q. Where there is a field from which casing-head gas was being produced, and well head gas, well head dry gas, that is, and the casing-head gas is taken to one of these processing plants and from there the processing takes out of the casing-head gas the liquid hydrocarbons and leaves

[3940]

sweet or sour gas, and that gas is flared, the residue gas is flared, what, if anything, can the Commission do with reference to regulatory powers? A. Do you mean in a field where there is a commingling plant which takes in casing-head gas and dry gas at the same time?

Q. That is correct. A. In that case, in some instances we wouldn't permit any flaring of gas and if gas would be flared in that plant, he'd, the operator, would have to show us first that he is utilizing all the gas from dry gas that is being produced but under the Commission's power on the

flare gas orders, we would insist they cut the take from these gas wells to utilize all the casing-head gas and every bit of gas that comes out from that plant.

Q. Is there a field up there in the Panhandle and West Texas that you can think of where that kind of situation exists? A. Well, a condition like that might exist in the West Panhandle field, in which there are oil wells being produced also, and if there is a plant in the Panhandle field which takes in casing-head gas and dry gas well gas of course, that example is not so good, because all the casing-head gas is utilized in that field and no gas is flared in that field, but you take, for instance, the

[3941]

Goldsmith Field or any other field in which there are gas cap wells and casing-head gas, that condition would exist.

* * *

[3948]

Q. I'll ask you, Mr. Baumel, if price has any relationship to such a situation as we have been talking about, and if so what is it, that is, the price of gas. A. I think that was already discussed yesterday by Mr. Murray. The price of gas is depressed you are going to have little conservation. If the price of gas is high you will have very little trouble in carrying out your conservation laws.

[3949]

Q. Under a low price, a depressed price, after the producer had gone to the expense of constructing the plant to take care of the casing-head gas heretofore having been

flared, would he or not have a tendency, a strong desire, to go and produce solely from his gas wells rather than to utilize his casing-head gas under the expensive processes?

MR. McALLISTER: I object, Mr. Examiner. I'll withdraw the objection. Let Mr. Baumel answer it if he can.

* * *

[3950]

MR. CRENSHAW: The very same question was asked of Mr. Murray and nobody objected to it at all and we have asked the same question of Mr. Baumel to see if he had an opinion about it. We are just wasting time with all kinds of ramifications. Let's go ahead.

MR. McALLISTER: Maybe the questions are what are wasting time.

PRESIDING EXAMINER: Go ahead.

THE WITNESS: I would say that it would put a producer in a dilemma if we ordered him to go ahead and build a gasoline plant and lay a gathering system to pick up this casing-head gas which was being flared and being utilized for legal purposes and later on a price was established at a low figure where he couldn't operate the gathering system and the plant, then naturally waste would be created and he would be forced to flare the gas and take the dry gas well gas.

BY MR. CRENSHAW:

Q. While we are on the subject of price, I'll ask you this question, do you have any opinion as an engineer and on the basis of your experience in dealing with regulations and

[3951]

administration of the laws of Texas with regard to gas, do you have any opinion about price and its relationship to conservation? If so, I wish you'd explain it.

MR. McALLISTER. I object. I think the witness has answered this question about three times this morning.

PRESIDING EXAMINER: You are now speaking of his experience?

MR. CRENSHAW: Yes, sir.

PRESIDING EXAMINER: In connection with the application of the conservation rules and laws?

MR. CRENSHAW: If he has any opinion about the relationship, if any, between price and conservation. If he has an opinion about it, I'd like for him to explain it.

MR. McALLISTER: I object, Mr. Examiner. The witness—

PRESIDING EXAMINER: (Interrupting.) The objection is overruled.

THE WITNESS: From an engineering standpoint, you cannot deny that economics has a great deal to do with the drilling of wells or the producing of wells.

PRESIDING EXAMINER: We aren't concerned in an argument here. What we are trying to find out if we can as I understand it is the experience of the Commission with respect to such situations.

THE WITNESS: The experience we find is that if an operator comes before the Commission for field rules and the Commission adopts a spacing rule of 40 acres or 160 acres and then the price of gas is depressed, we tell him he has to drill the wells on

[3952]

160 acres or on 40 acres but he can't afford to drill them under the price of gas. The question then comes in that waste will take place and the natural resources will not be recovered unless he drills those wells at 40 acres or 160 acres. He is forced under depressed gas prices to drill them on 640 or a thousand acres.

BY MR. McALLISTER:

Q. Where has that ever occurred? A. It hasn't occurred yet, but—

* * *

[3953]

BY MR. CRENSHAW:

Q. That is one instance. Are there any other instances you can think of where price has any relationship to conservation?

* * *

MR. CRENSHAW: I wanted him to develop from his own experience, I mean I wanted him to express an opinion based on his own experience, in any regard he can think of, whereby he would have an opinion as to whether price had any relationship to conservation. He told us about insofar as spacing was concerned, whereby he had an opinion how it would affect, price would have some affect or relationship to conservation. What I want him to do is tell of any other phase of conservation whereby he thinks or has an opinion about price in relationship to conservation. If he hasn't any more he can say. If he does, why, he can say that.

* * *

[3954]

THE WITNESS: Another case would be in the premature abandonment of these marginal gas wells or the drilling of submarginal acreage, marginal acreage, where an operator couldn't afford to drill his needed wells if the price of gas was depressed or would be forced to abandon his so-called marginal gas wells.

[3955]

BY MR. CHENSHAW:

Q. Is there any other situation where price would affect or relate to conservation? A. The other one I have already answered was casing-head gas.

Q. Based upon your experience have you any opinion which would show to us whether or not under a situation where there is a low price for gas that the incentive to develop and produce among the drillers and producers and those who look for oil and gas, is that incentive raised or lowered in accordance with the price of the product? A. Well, I believe that past experience in the drilling of gas wells which have increased over the period of the last ten years, that shows when the price of gas was low we'd have few gas wells being drilled. As the price of gas has increased we are drilling more and more gas wells.

Q. Would it be your opinion that a higher price for gas would tend to increase the incentive for the further development of gas? A. Yes, sir, that is my opinion.

Q. Would you have any opinion with reference to whether the higher price for gas the more possible it is for the Commission to make further use of casing-head

[3956]

gas, stopping the flaring of gas? A. Yes, sir, that is correct.

Q. I believe you heard Commissioner Murray during the last few days say that due to the fact the price of casing-head gas was so low that that was one of the reasons why it had been flared or vented to the air for a long number of years.

MR. McALLISTER: I object, Mr. Examiner. I don't think this witness is called upon to appraise the value of Mr. Murray's testimony.

PRESIDING EXAMINER: I agree with that.

MR. CRENSHAW: He heard him testify.

BY MR. CRENSHAW:

Q. Would you agree with that or not.

PRESIDING EXAMINER: Go ahead. He isn't here.

THE WITNESS: My answer wouldn't be predicated on whether he was here or not. I agree with him one hundred per cent in what he says.

BY MR. McALLISTER:

Q. And you don't disagree with him? A. I don't disagree with him either.

MR. TULANE: Mr. Crenshaw, may I interject a question here?

MR. CRENSHAW: Yes, surely.

BY MR. TULANE:

[3957]

Q. Why should the low price of casing head gas cause flaring? A. Well, I believe the Courts in upholding our orders specifically said that in cases where it would be

uneconomical where we forced them to conserve by virtue of confiscation that we didn't have the power to force an operator to conserve gas where we force him into confiscating his property; if the price of gas was so low that he couldn't afford to build a gathering system on his lines, I doubt very much whether our orders would have been upheld in Court.

BY MR. McALLISTER:

Q. How about the Crane plant, there is a gathering system where the gas was being flared to the air? A. Not all the wells were connected to the plant.

Q. Not all of them, but 66 and 2/3 per cent of them or better were. A. Yes, sir, but they have showed before the Commission that the gas was so sour you couldn't get into any line.

Q. You didn't have a line, did you, so the price didn't have anything to do with it, you didn't have an outlet? A. No, but when we asked them to put it back in the ground they couldn't afford to.

Q. That is right, that might be, but that was just a

[3958]

condition that nobody had any control over? A. That is correct.

Q. I mean you can't blame all the ills of the industry upon price? A. Well, that is correct, but price has a great deal to do with conservation.

* * *

[3973]

Q. If the conditions ever warrant it, the Commission

may lower the ratio, in which event it would help to utilize more gas in the production of the oil, is that correct? A. I don't understand you.

Q. If they lowered the ratio, made more— A. (Interrupting.) If the Commission lowered the ratio that would require less gas to be produced with the oil.

Q. And if that were so it would mean more gas could be used out— A. (Interrupting.) No, if the Commission reduced the gas-oil ratio for the field it would mean that more of the gas would be left in the reservoir and not be produced with the oil.

Q. I see. Then that wouldn't affect the amount of gas that reached the market at all, is that correct?

[3974]

A. It would tend to cut down your supply of casing-head gas from that field into the plant.

Q. If that is so, explain how that would result? A. Assuming that the field was existing at a six thousand to one ratio, more gas would be produced with oil through the gasoline plant and processed and be put in the El Paso Natural Gas transmission lines. If the Commission reduced the gas-oil ratio to two thousand to one, it would reduce the gas to be produced from that reservoir in that proportion and there would be less gas going into the transmission lines.

Q. So the setting of the gas-oil ratio does have some effect on the gas that is put on the market, is that correct? A. That is correct, yes, sir.

* * *

[4018]

RICHARD R. SPURRIER

was called as a witness, and having been first duly sworn, was examined and testified as follows:

Direct Examination by Mr. Chumbris

Q. What is your name, please? A. Richard R. Spurrier.

Q. Will you please give your address? A. Santa Fe, New Mexico.

Q. Do you hold an official capacity with the State of New Mexico? A. I do.

Q. What is that official office? A. State geologist and by reason of that office secretary of the Oil Conservation Commission.

Q. How long have you been state geologist? A. Since 1945.

Q. How long have you been a member of the State Oil Conservation Commission?

[4019]

A. For the exact same length of time.

Q. And you are also secretary of the Commission? A. Yes, sir.

Q. Will you please state your qualifications of office, please? A. I have a degree in petroleum engineering from the New Mexico School of Mines. It is called a Bachelor of Science in petroleum engineering. I have stated these qualifications before the Federal Power Commission before.

I will be glad to carry these as far as necessary but in the interest of time I think I can cut them short.

* * *

[4021]

Q. Will you relate the duties of your office in a general manner? A. As a matter of fact, the Oil Conservation Commission is composed of the Governor, the Land Commissioner and the State Geologist. As a matter of practice, the State Geologist spends all of his time in the administration of the Oil Conservation Commission, and completely supervises administratively all the functions of the Commission with the consent and advice of the other two members of the Commission.

* * *

[4051]

BY MR. CHUMBRIS:

Q. Mr. Spurrier, will you state the objects and purposes of the State Oil Conservation Commission? A. The purpose of the Oil Conservation Commission of New Mexico is to conserve oil and gas in New Mexico.

Q. What action does the Oil Conservation Commission take toward carrying out that program? A. The New Mexico Commission is the state regulatory body for oil and gas and as such we supervise the drilling, completion and production of all oil and gas wells.

Q. The Oil Conservation Commission, when was it inaugurated into the State of New Mexico? A. It was established by statute in 1935.

Q. And the Conservation Commission has been oper-

ating on through the years to the present time? A. Yes.

Q. Will you please explain how often the Oil Conservation Commission meets in the State of New Mexico? A. The Commission meets informally at any time it cares to, but it has regular meetings once a month.

Q. And they are in the City of Santa Fe? A. Yes.

Q. But there are occasions when they may hold a

[4052]

special meeting in other parts of the state? A. No, the Commission does not meet anywhere except in Santa Fe.

Q. How does the Commission carry out its program of conservation?

Give us several illustrations. A. Well, in a general way, the Oil Commission in supervising the production and drilling practices, the Commission keeps acquainted with the current practice, best practices in the oil and gas fields and in that way we try and do, I think, eliminate practically all waste, that is possible.

[4053]

Q. Could you state whether the program of conservation has retarded waste considerably in the last few years?

A. Well, I think it has. In the interest of time and in the fact that several Commissions have testified before, I might say that we operate in a similar manner, and that with the—well, I might call it off at that, unless you want a specific instance.

Q. The Oil Conservation Act, as it now stands in the State of New Mexico, how does that compare with the

Oil Conservation Acts of her sister states? A. We were fortunate to benefit by some of the mistakes of the older producing states, such as Texas and Oklahoma and we, at the time our law was passed by the legislature, it was considered as a model law. At least two states have largely copied our law, I believe it was Arkansas and Mississippi who copied New Mexico's statutes, not entirely but substantially.

Q. Could you state whether the price of gas has any relation to conservation?

MR. TULANE: Mr. Examiner, may I object to that and ask first of all if he has an opinion and second what his opinion is based on?

PRESIDING EXAMINER: Yes, I think that might be developed.

THE WITNESS: Shall I answer Mr. Tulane's question?

BY MR. TULANE:

Q. First, do you have an opinion?

[4054]

A. Yes, I do.

Q. On what is that opinion based? A. My experience in New Mexico.

Q. I mean what is the factual background? I mean what situations have you run into? A. I can remember very well when I worked in Lee County, that is the southeastern corner of New Mexico, in 1940. As I remember the general current price for gas was two cents per Mcf. Seventy-five million cubic feet of gas, which I have seen coming out of one flare per day at that time was worth

\$9,000 per day at 15 cents in the Ohio market. It was obvious to someone that if it was worth that much in Ohio there must be some way to enhance the value of it in New Mexico, and you can see that that is what has happened. I should have used California, because all of the gas exported from New Mexico, practically all of it, finds a market in California.

In those days I couldn't give you an exact figure, but I know there were Millions of cubic feet of gas flared in New Mexico every day. The last official figure that we have compiled shows that that figure has been cut by 80 some per cent. There is only a small, 18 per cent or less gas being flared now as there was in 1940 or even five years ago.

BY MR. PERDUE:

Q. Pardon me a moment there. Do you mean 18 per cent of the total produced today or 18 per cent of that which was flared

[4055]

in 1940? A. Less than 18 per cent of the casing-head gas that is produced today is flared.

MR. PERDUE: Thank you.

BY MR. SPARKS:

Q. And in 1940 substantially all of it was? A. That is right.

Q. And in addition to that which was flared in gasoline plants there was untold millions of it that was flared at the wells that wasn't even gathered and taken into a plant and wasn't measured? A. That is correct.

Q. And doesn't appear in any official reports, is that right? A. Yes, sir. One official estimate arrived at five hundred and some million per day, but that was an estimate.

Q. It wasn't even worth metering it? A. Sir?

Q. It wasn't even worth metering it and flaring it? A. That is right.

BY MR. CHUMBRIS:

Q. The Oil Conservation Commission does it have the authority for well spacing? A. Yes, it does.

Q. Will you explain the procedure under which you act

[4056]

there? A. The statute specifically states—I don't see the section—that the Commission has the authority to fix spacing, not only the authority but the responsibility.

Q. And in practice how does that work? A. In practice the Commission calls a hearing any time a new pool is discovered and at this hearing the pertinent matters as to the reservoir characteristics are brought out and the Commission establishes spacing.

Q. And your program as to well spacing, is that part of your conservation program? A. Yes, it is.

Q. What other acts does the Oil Conservation Commission put into practice under the laws and rules and regulations as part of its conservation program? A. Well, the Commission enforces proration of oil and it is now incumbent upon the Commission to enforce proration of gas, which we have not yet done because we have just taken testimony to outline the pools, gas pools. We also have

the statute behind us on the matter of ratable take, and we enforce that.

Q. Will you explain your procedure there? A. Well, ratable take is so simply done that it is just a matter of putting the amount that each well may produce into the proration schedules, and each well may only produce that which

[4057]

is authorized in the schedule which is the official monthly schedule of the Oil Conservation Commission.

Q. Does the Act provide for common purchaser? A. Yes, it does.

Q. Does that apply to oil, to gas as well as oil? A. Yes, it does.

Q. What do you consider to be the maximum effort of conservation of gas in the State of New Mexico? A. I don't know if I understand your question.

Q. What I'm driving at is when would you be satisfied that the State of New Mexico is getting the most out of its conservation program, is that by getting the most production out of the oil and gas wells? Is that what you would consider— A. (Interrupting.) No, we do not get the most that we can, that is, we do not produce all the wells at their maximum rate. As Mr. Baumel put it this morning, we try to produce at maximum efficient rate, although we do not have exactly the same type of hearings and conditions for setting allowable as does Texas.

Q. Then maximum efficient rate would be what you are pointing to under your conservation program? A. That is right.

Q. How long as the production of gas been going on in the State of New Mexico? A. Practically since the first production of oil, and

[4058]

that was in 1911, I believe it was.

Q. When has it been extensively produced in the State of New Mexico or when did the operations begin to rapidly grow? A. Do you mean the production of gas or—

Q. (Interrupting.) Yes, gas. A. Well, New Mexico's large production of gas is wet gas, so-called, or casing-head gas, which is produced incidentally with oil. I don't know if I understand your question, but since 1945 the production of oil has risen from about 98,000 barrels per day to about 140,000 barrels a day, and the production of casing-head gas, I believe, has risen about on the same percentage basis.

Q. How about the production of gas from the wells? A. The production from dry gas wells, the amount is something I do not know, and I am not familiar with how it has increased in the past 10 years.

Q. Is New Mexico, in view of the development in the San Juan region, considered a prospective, great prospective, producer of gas? A. Yes, it is.

Q. And that has been a rather recent development, hasn't it? A. Yes.

Q. Will you state why the development is just beginning to become a fact rather than in years passed?

[4059]

A. If you are speaking of the San Juan Basin, the reason

there is because there has never been a market for gas, that is, any sizeable market, and because there is very little oil produced in the San Juan Basin and very little gas is produced with that oil.

Q. Does the price of the gas that they receive have any effect on that production?

MR. TULANE: Just a minute, Mr. Examiner. I don't understand that question. I object to it.

BY MR. CHUMBRIS:

Q. Does the price that the producer receives affect the progress of producing gas in that particular area? A. Well, I believe that it does. However—

MR. TULANE: (Interrupting.) I think that is an answer to that question. Now ask him how if you want to.

MR. CHUMBRIS: Do you object?

MR. TULANE: I object. I can't understand what you are driving at. I am sorry if I am stupid but—

PRESIDING EXAMINER: (Interrupting.) All right, he has answered the question.

BY MR. CHUMBRIS:

Q. What was the answer to that question? A. I believe that it does.

Q. You believe it does? A. Yes, sir.

[4060]

Q. Will you explain how it affects it?

MR. TULANE: Mr. Examiner, I am going to object again. What price are you referring to, the price at the wellhead, the price at some market and if so, what market?

MR. CHUMBRIS: I'm talking about the price to the producer.

MR. TULANE: Where? At the wellhead?

MR. CHUMBRIS: That is right.

MR. TULANE: Are you asking him whether the price at the wellhead will spur greater exploration and production, is that what you are driving at?

MR. CHUMBRIS: That is what I am getting at, yes.

MR. TULANE: All right.

MR. PURDUE: That is objected to as immaterial, Mr. Examiner, and certainly outside the issues of this case.

MR. PERDUE: It is too basic.

PRESIDING EXAMINER: Too what?

MR. PERDUE: It is too basic. Naturally if the price of the products goes up people try to produce it.

PRESIDING EXAMINER: I think that is true, but we've had the same question here.

MR. CHUMBRIS: That thing has been brought out for the last four days. I hope it didn't startle you gentlemen.

MR. PERDUE: No, but it is a basic fact that when the price of any products goes up people try to produce that product. I know it has been going over four days—

[4061]

MR. SPARKS: (Interrupting.) I think it is worth driving home again, Mr. Examiner.

PRESIDING EXAMINER: Beg pardon?

MR. SPARKS: I think it is worth driving home again.

PRESIDING EXAMINER: Well, is it driven now or do you want to carry on?

MR. PURDUE: Also exploration for gas or oil is not conservation, Mr. Examiner.

THE WITNESS: That is your opinion.

MR. CHUMBRIS: That might be your opinion.

MR. SPARKS: Ask him that question.

MR. CHUMBRIS: I was stopped when I was going in that direction.

BY MR. CHUMBRIS:

Q. Will you answer the question Mr. Purdue just—

A. (Interrupting.) I don't know if it was a question, but as I understand it the idea has been advanced that the use of gas or exploration for gas is not conservation. As we understand conservation it is the wise use of natural resources.

BY MR. PERDUE:

Q. Did you say wise use or wide use? A. Wise, w-i-s-e.

BY MR. SPARKS:

Q. Mr. Spurrier, you can't conserve it until you find it, can you?

[4062]

A. That is right. We have millions of tons of coal up in the San Juan Basin which was reserved by one administration and it still is.

MR. PURDUE: Mr. Examiner, as long as it is in the ground it is conserved, that is obvious.

PRESIDING EXAMINER: Go ahead.

THE WITNESS: I think it hinges on the definition of a term. We are talking about using gas here, so I say our conception of conservation is wise use of gas.

[4063]

BY MR. CHUMBRIS:

Q. I'd like to get your opinion on whether you feel that in carrying out your program of oil conservation, whether the element of price is related to conservation of gas. A. I think I partially answered that question. I didn't carry the thing through. In 1940 the price of gas in Lee County was about two cents. It approximates somewhere between four and five now, and I gave you the figures on the difference of the amount of gas being flared. I think that was basic, too.

Q. What effect does price have on abandonment of wells? A. Simply this, that if you get a higher price for gas, if a producer receives a higher price for gas, he can afford to produce a well longer and to a lower abandonment pressure.

Q. If there is a great abandonment of wells, does that affect your conservation picture? A. Well, naturally it does.

Q. Has your Commission ever exercised the power to fix the price of gas at the well head? A. No, it has not.

Q. Could you state whether in your opinion your Commission has the power and the authority under the law of

[4064]

the State of New Mexico and under the rules and regulations to fix a price. A. Well, my opinion is that it can. However, it is a moot question because it has never gone to court in New Mexico, and we have not done it. However, we did have a case where price was mentioned in conjunction with a ratable take situation. In this case which

came before the Commission about a year ago for hearing, four or five wells in a pool were not even showing a ratable take, and naturally the owner of the well who was not selling gas or was selling a small amount brought the case up to the Commission as against the owner of a well who was selling several million feet a day. The case was continued for lack of evidence, and at the next hearing dismissal was asked for and granted by the Commission because in the meantime the operators had arrived at a common price and a common amount which is ratable take.

Q. In other words, that is one instance in which by amicable arrangement the Commission did not come to the decisive point of deciding whether they were going to have the authority to fix a price or not? A. That is right.

Q. Mr. Spurrier, could you state in your opinion that if the Federal Power Commission should assume jurisdiction over the producers and gatherers of natural gas,

[4065]

whether that fact would conflict with the regulatory power of the Oil Conservation Commission?

MR. PERDUE: I object to that question, your Honor. The assumption in there that the Federal Power Commission may take jurisdiction over producers and gatherers of natural gas has no bearing in this case.

MR. CHUMBRIS: I thought that was the issue of the case or one of the serious issues of the case.

MR. PERDUE: The issue in this case is whether the Federal Power Commission has jurisdiction over Phillips Petroleum Company, not all the producers and gatherers of natural gas.

PRESIDING EXAMINER: We are concerned here with the application to Phillips Petroleum Company.

MR. SPARKS: (Interrupting.) I know, but the thing is whether Phillips is a producer and then if it is subject to jurisdiction and that is a proper assumption to make.

MR. CHUMBRIS: Otherwise, Mr. Examiner, the State of New Mexico would not have been permitted to intervene in this case. We are not interested, as the other states have stated, in the battle between the Federal Power Commission and the Phillips Petroleum Company as a company. Our interest in the case is whether the Federal Power Commission will assume jurisdiction over producers and gatherers of gas in the State of New Mexico, which the Supreme

[4066]

Court has stated and even the decisions of the Federal Power Commission have stated that the state regulatory body has that jurisdiction, so to us, this particular question and as stated in the Interstate Natural Gas Case that jurisdiction will not lie with the Federal Power Commission so long as you can show a conflict between the Federal body and the state regulatory body.

PRESIDING EXAMINER: There is no conflict as far as this case is concerned, except insofar as the Phillips Petroleum Company is concerned.

MR. CHUMBRIS: Well, Phillips Petroleum Company is one of the companies that is regulated by our state regulatory body.

PRESIDING EXAMINER: I assume that to be the case, I know that to be the case, or else you probably

wouldn't be testifying to this extent.

MR. CHUMBRIS: That is right.

* * *

[4071]

Q. You have stated that the Oil Conservation Commission has certain power over the conservation program such as well spacing, is that correct? A. Yes.

Q. Assume that the Federal Power Commission attempted to take jurisdiction over producers and gatherers of gas as to well spacing, would that conflict? A. It certainly would.

MR. PERDUE: Once again we have the Federal Power Commission taking jurisdiction over all producers and gatherers.

MR. CHUMBRIS: That is the issue in the case.

PRESIDING EXAMINER: That is another one of those assumptions, many of which have been made.

MR. PERDUE: I think if we made the assumption, sir, that the Federal Power Commission would find it had jurisdiction over the Phillips Petroleum Company, I'd have no objection, but he assumes they have jurisdiction over all producers and gatherers. That is not in issue.

PRESIDING EXAMINER: All right.

* * *

[4073]

Q. Mr. Spurrier, assuming that the Federal Power Commission

[4074]

takes jurisdiction over producers and gatherers of natural gas in the State of New Mexico, as it affects the Phillips

Petroleum Company, would that conflict, and assuming that that taking jurisdiction as to these various phases of regulation such as well spacing, proration and other means of conservation, in which the State of New Mexico already, as you testified, adequate and competent authority to act and which they have acted, would you consider the action of the Federal Power Commission in such a case to conflict with your state body?

MR. PERDUE: I object, Mr. Examiner. May we have the question read on that—

PRESIDING EXAMINER: (Interrupting.) Read the question, please.

(The question was read by the reporter.)

PRESIDING EXAMINER: Do you understand the question?

THE WITNESS: Yes, sir, I do.

PRESIDING EXAMINER: All right, go ahead.

THE WITNESS: And the answer is yes.

BY MR. CHUMBRIS:

Q. Assuming that the Federal Power Commission would take jurisdiction as to the fixing of prices of gas as it affects producers and gatherers of natural gas in the State of New Mexico and as it affects the Phillips Petroleum Company's operations in the State of New Mexico, that it would be in conflict with the regulatory body of the State of New Mexico with the Oil Conservation Commission?

[4075]

MR. PERDUE: I object to it on the same grounds, Mr. Examiner.

MR. CHUMBRIS: It is the same question.

MR. PERDUE: It is the same question and it has the same thing in it.

MR. CHUMBRIS: Your Honor, I don't think you ought to be required to rule each time to each question. He objects, you have already ruled the question is permissible, so why doesn't he state his objection without arguing the same time.

MR. PERDUE: You couldn't possibly have ruled that question is permissible, Mr. Examiner.

MR. TULANE: That question is double also, you put in one type of producer and Phillips and you didn't show they are both in the same status.

PRESIDING EXAMINER: Read the question.

(The question was read by the reporter.)

PRESIDING EXAMINER: The question obviously isn't complete.

MR. CHUMBRIS: Would you read that back to me, the question as I put it.

(The question was read again by the reporter.)

BY MR. CHUMBRIS:

Q. Just would it be, that would take care of it?

MR. PURDUE: Same objection, Mr. Examiner, on the same ground. It is certainly asking a whole lot of this witness to undertake to express an opinion on that. There is no foundation laid.

[4076]

MR. CHUMBRIS: There certainly has. He has testified that the State Oil Conservation Commission has author-

ity to do certain things to conserve gas. He has also testified that he considers that the fixing of a price is related to conservation. He also has testified that he feels that his regulatory body could fix price of gas at the wellhead of producers and gatherers of the natural gas. All right, he has set that up. Now all he is asking to do is if the Federal Power Commission tried to do the same thing that they are doing would it be in conflict. I don't see where that isn't in line with the other questions that have been asked here for the last three or four days.

MR. PERDUE: I don't believe Mr. Spurrier testified the Commission, of which he is a member, had the power and authority in the State of New Mexico, had the authority to fix the price.

MR. CHUMBRIS: He did state that, you probably weren't listening, Mr. Perdue.

MR. PERDUE: No, I was listening.

MR. PURDUE: He said it was a moot question.

MR. CHUMBRIS: That is right, he said the court itself had not decided the question because it has never been presented to the court. He further stated that the closest instance of price fixing was the situation where the one party filed the complaint and before the case was determined the other parties realizing what would take affect, went home and worked the thing out within the time that was permitted for the continuance of the

[4077]

case. That was all in the record, gentlemen.

MR. PERDUE: He never definitely stated—

PRESIDING EXAMINER: (Interrupting.) Just a minute. To begin with I think the question could be reframed and perhaps a lot of confusion and a lot of argument might be avoided.

As I understand it, what you are asking the witness is that assuming that the Federal Power Commission fixes the price of gas to producers and gatherers of the gas in New Mexico, would that conflict with the regulatory authority of the State of New Mexico?

MR. CHUMBRIS: That is right. The only thing is when I made that long question the last time and I paused for a minute I might have used the word that instead of would be and we changed it to that extent.

PRESIDING EXAMINER: Answer the question now.

MR. SPARKS: The Examiner's question?

PRESIDING EXAMINER: Yes.

THE WITNESS: The answer is yes.

* * *

[4078]

Cross-Examination by Mr. Perdue

* * *

[4085]

Q. Therefore, I believe it is safe to presume, is it not, sir, from your answers that the Southern Union Gas Company and the El Paso Natural Gas Company in all respects and in every way possible, and as you can check through your agents, that those companies comply with the New Mexico Oil Conservation Commission's rules and regula-

tions promulgated under the authority given to you by the New Mexico Legislature and entered in this proceeding as Exhibit No. 145, is that not correct, sir? A. I think so.

Q. Do you know, sir, whether the Southern Union Gas Company, owns leases within the State of New Mexico?

A. I think that they do. I am quite sure they do.

Q. Do you know whether they own and lease wells within the State of New Mexico? A. Own and lease wells?

Q. Own or lease wells. A. They do own wells and they lease land.

Q. Lease land upon which wells are located?

[4086]

A. That is right.

Q. Thank you. And they own and operate and utilize in their operations lines which may be classified as field lines in the State of New Mexico? A. I don't know what you mean by field lines except that they are gathering lines which connect to a main line.

Q. And they also own and operate and utilize in their operations the main lines to which the gathering lines are connected in the State of New Mexico? A. That is right.

Q. And the same is true of the gasoline plants? A. I don't follow your question.

Q. Do they also own and operate and utilize in their operations gasoline plants within the State of New Mexico? A. Does Southern Union?

Q. That is right. A. Yes, they do have some gasoline plants.

* * *

[4088]

Q. Mr. Spurrier, are you aware of the fact that El Paso Natural Gas Company owns or leases well, field lines and gasoline plants within the State of New Mexico?

* * *

[4089]

THE WITNESS: No, I don't need the question read, I don't believe. I think the question is does El Paso own or lease wells, gasoline plants and field lines and so on and so forth. The question cannot be answered categorically yes or not. Is that what you wanted me to do?

BY MR. PERDUE:

Q. I'd just like you to answer the question that's all.
A. I'm sure the El Paso Company does own some production, that is, some wells, although they are not required to furnish the contracts to us to show that. As I remember their testimony in a former case before the Federal Power Commission, it was shown they do own wells. I am not sure they own any gasoline plants. I think they perhaps are either constructing one or will, and, of course, the matter of field lines I am sure they do own some. How many, I don't know. How much, I don't know.

Q. I show you Exhibit 146-F, Mr. Spurrier, in this proceeding, operators monthly report which has been introduced into evidence by the State of New Mexico, and ask you if it is within your duties as a member of the Oil Conservation

[4090]

Commission of the State of New Mexico, to inspect or in any way see those reports as they are filed with the Oil Conservation Commission? A. It is not.

Q. It is not your duty? You never see those reports, then, as they are filed by the companies that fill them out and file them with the Commission? A. Occasionally I see one but I make no practice of checking form C-115, I have a statistical department that does that.

Q. Do you know, sir, what company in the State of New Mexico owns the gasoline plants which are known as Jal plant No. 1, Jal plant No. 2 and Jal plant No. 3?

A. I believe Phillips owns plants so numbered.

Q. Thank you.

BY MR. CHUMBRIS:

Q. Are you sure whether they do or do you just think they do? A. I think that they do. I remember at least two of their plants. I don't know the exact locations of those plants, except that they are in Lee County.

BY MR. PERDUE:

Q. In your tenure as a member of the New Mexico Oil Conservation Commission has there been called to your attention any instance of a conflict between the applicability of rules and

[4091]

regulations of your Commission and the rules and regulations of the Federal Power Commission insofar as they apply to the operation of the El Paso Natural Gas Company? A. Did you say has any conflict been called to my attention? The answer is no.

Q. You stated, sir, you did not know whether the Southern Union Gas Company was such a gas company as would be classified a natural gas company as that term is used in the Natural Gas Act. If Southern Union Gas Company were a natural gas company within the meaning of that term as it is used in the Natural Gas Act, would it not be reasonable to assume that if a conflict did occur between the applicability of the rules and regulations of the New Mexico Oil Conservation Commission and the rules and regulations of the Federal Power Commission, such would have been called to your attention? A. I think you lost me on that question.

MR. PERDUE: May we have the question read.

PRESIDING EXAMINER: Read the question.

(The question was read by the reporter.)

A. I think probably it would.

BY MR. PERDUE:

Q. Has any such conflict been called to your attention? A. If and if and if, yes.

Q. Has during the tenure of your office any such conflict been called to your attention?

[4092]

A. I don't know that Southern Union is a natural gas company, or are they subject to your jurisdiction, they sell all their gas intrastate.

Q. Well, I'll tell you, Mr. Spurrier, they are. Southern Union Natural Gas Company is a natural Gas company under the jurisdiction of the Federal Power Commission as is El Paso. A. Then the answer to both your questions is no, I have never heard of any conflict.

* * *

[4097]

Q. Mr. Spurrier, Exhibit No. 145 in this proceeding, which is the rules and regulations of the New Mexico Oil Conservation Commission, Page 9, Rule 104, the rule deals with, as its title indicates, "well space, acreage requirements for drilling tracts". Do you have a copy of that before you? A. Yes.

Q. You have stated that Southern Union Gas Company and

[4098]

El Paso Natural Gas Company to the best of your knowledge do own and lease property upon which wells have been drilled within the State of New Mexico. Could you tell me now, sir, whether those companies have complied to the best of your knowledge with Rule No. 104? A. Yes, they have.

Q. And to the best of your knowledge there has never been a conflict between the compliance by those companies of that rule and the compliance by those companies with the rules of the Federal Power Commission? A. I have no knowledge of any rules of the Federal Power Commission about spacing.

Q. No, but if there had been a conflict that would have been called to your attention would it not, sir? A. Yes, I am sure it would.

Q. Has such conflict been called to your attention? A. No.

Q. Mr. Spurrier, you stated in answer to a question asked of you by Mr. Chumbris, that the State of New

Mexico had the Common Purchaser Act, is that not correct? A. I think it does, yes.

Q. Could you tell me if Rule 902, "Ratable Take", on page 24 of Exhibit 145 is the rule that the Oil Conservation Commission of New Mexico has promulgated under the Common Purchaser Act?

[4099]

A. Rule 902 says "Ratable take". It is entitled ratable take. I don't know if it deals with common purchaser or not. Common purchaser is defined in the statutes, I might say.

Q. May I call your attention to rule—

MR. SPARKS: (Interrupting.) It is also defined in the rules, if I am not mistaken.

BY MR. PERDUE:

Q. Rule 802 on page 23 is "Ratable Take, Common Purchaser", and applies to oil does it not, sir? A. Yes.

Q. And Rule 902 on page 24 seems to be ratable take although it does not say common purchaser—

MR. SPARKS: (Interrupting.) Yes, it does.

THE WITNESS: It does in the second line.

BY MR. PERDUE:

Q. It does? A. Yes.

Q. Would you say, then, after the opportunity you have had to look at the rule now that that is the rule promulgated by your Commission under the Common Purchaser Act? A. Yes, it is.

Q. It is. And it is a fact, is it not, that the rule goes on to provide that the provision of this subsection shall not apply to purchasers of casing-head gas from oil wells?

MR. SPARKS: Purchases.

[4100]

MR. PERDUE: What did I say?

MR. SPARKS: I thought you said purchasers.

BY MR. PERDUE:

Q. "To purchases of casing-head gas from oil wells?"

A. I forget how you phrased the question, but that paragraph 2 is "to purchases of casing-head gas from oil wells".

Q. And Rule 902 does not apply to such purchases?

A. State that again, please.

Q. Rule 902 does not apply, then, to such purchases, is that not correct? A. That is right.

Q. Have you ever been aware, sir, or has it ever been called to your attention that there has existed or does exist a conflict between rule 902 of the rules and regulations of the New Mexico Oil Conservation Commission, as that rule applies to the operations of the Southern Union Gas Company and the El Paso Natural Gas Company within the State of New Mexico and the rules and regulations of the Federal Power Commission? A. Has the conflict ever been called to my attention?

Q. That is correct. A. No, it has not.

* * *

[4103]

Q. Sir, you made the statement upon your direct examination that the wisest use of gas is conservation? A. That is right.

Q. As to the word "use", the way you used the word "use", were you thinking there of the end result, the end use, of the gas? A. Yes. I was thinking whether it is to

be flared or to be used for commercial purposes or domestic purposes.

Q. You weren't thinking, then, of the use of the gas, say, El Paso Natural Gas Company transports the gas to California, you were not thinking of the way the consumer in California used the gas? In other words, you mean if the gas is used to be transported by El Paso, that is a wise use? A. Yes.

Q. And that would be conservation because the gas is not blown or flared in the air? A. It is not wasted.

Q. Now, sir, you said that between the years 1940 and 1941, the waste of gas in the State of New Mexico had been greatly reduced and you cited as— A. (Interrupting.) No, I did not say that.

Q. You did not say that? A. I did not.

Q. Didn't you say that the amount of gas—

[4104]

A. (Interrupting.) I said between 1940 and 1950.

Q. From the years 1940 to 1950 that the waste of gas in New Mexico had been greatly reduced, is that not correct? A. That is right.

Q. And you cited as the reason or what in your opinion was the reason for such reduction, and such a great measure of conservation of the gas, that the gas had risen in price. I forget the amounts and they are not material. A. That is true.

Q. In that interim, has the Oil Conservation Commission of the State of New Mexico taken any measures to aid in the conservation of gas, natural gas, in the State of New

Mexico? A. Do you mean—if you mean shut down orders and that sort of thing, no, we haven't.

Q. You haven't promulgated any rules or regulations which to your mind would aid or enhance the measure of conservation? A. Yes, we have.

Q. You have? A. Repressuring plants, pressure maintenance plants.

Q. Would you not say, sir, that in your opinion maybe the measures the Oil Conservation Commission of New Mexico had taken in the years from 1940 to 1950 might share a little

[4105]

bit in bringing about this great advance in conservation in the State of New Mexico? A. Yes, I think we have helped conservation in New Mexico.

Q. Along with the two-cent rise in price, the Conservation might also be given a little credit? A. Yes, sir.

Q. In fact, if we get right down to it, the efforts of the Conservation Commission might be given most of the credit? A. No. I think the market and the price are the two important things.

Q. The fact that the El Paso Natural Gas Company came in and took large amounts of casing-head gas in that period would you not say, and I think we assuredly would, that the efforts of the New Mexico Conservation Commission greatly aided in El Paso coming in and taking that gas to market which had been flared before? A. I would say greatly. I would not say we helped.

Q. Helped a great deal? A. No.

Q. Helped to some extent? A. Right.

Q. Rather than a primary reason for the great percentage of gas which is now conserved in the State of New

[4106]

Mexico, we find that the efforts of the New Mexico Oil Conservation Commission are at least as great as if not greater than the rise in price, is that not correct, sir? A. Would you restate your question. It seemed to me very similar to one you just asked before.

PRESIDING EXAMINER: Will you read the question, please.

(The last question was read by the reporter.)

A. No, I wouldn't say that was correct.

BY MR. PERDUE:

Q. If the El Paso Natural Gas Pipe Line Company had been willing to take the natural gas from New Mexico at the two cent rate, you said applied in the year 1940, would not that have been just as great a conservation measure? A. If they had been willing to, yes.

Q. So it wasn't the price at which El Paso took the gas, it was the fact that they did take the gas? A. No, that is not correct. The price very materially had a lot to do with it, because as soon as El Paso wanted to contract for the gas, there was a competitive market and the price came up, and when the price came up, the gathering systems could be laid to gather this flare casing-head gas.

* * *

[4110]

Q. Well, the question and the questions leading up

to it was this, I asked you if you knew that the Federal Power Commission regulated certain rates of the El Paso Natural Gas Company, and you indicated you did. Then I asked you if, in the course of regulating those rates, has it ever been called to your attention that a conflict arose between such regulation by the Federal Power Commission and the applicability of the rules and regulations of the New

[4111]

Mexico Oil Conservation Commission. A. The Federal Power Commission does not regulate the price of gas to El Paso in New Mexico.

Q. That was not the question, sir.

MR. PERDUE: Will you read the question, please.

(The last question was read by the reporter.)

A. No conflict has ever been called to my attention, no.

* * *

[4113]

Q. You stated that to the best of your knowledge, no conflict arose by virtue of the fact that the Federal Power Commission regulated certain rates of the El Paso Natural Gas Company? A. That is right.

Q. And you also said then in answer to a question of Mr. Sparks' that those certain sales took place outside the borders of the State of New Mexico and now I'm trying to determine whether you think that the reason no conflict has arisen is merely because of the fact that the sales took place outside the borders of the State of New Mexico.

A. I don't think that has much to do with it, no.

Q. In other words, if the same sales took place within the borders of the State of New Mexico, you do not think

[4114]

that by virtue of that fact, bringing the point of sale back within the borders of the State of New Mexico, there would ipso facto arise a conflict? A. No; I think that is a pretty hypothetical question.

Q. Hypothetical, but proper. A. As a matter of fact, I don't know whether it would or not.

* * *

[4115]

Q. And if the El Paso Natural Gas Company were a purchaser and producer of natural gas in the State of New Mexico, and the operations of the two companies as purchasers and producers were similar in nature and extent and scope, and if the El Paso Natural Gas Company—and it is—were a natural gas company within the meaning of the term as it is used in the natural gas act, and if by virtue of being such a natural gas company no conflict arose between the jurisdiction of the Federal Power Commission and that of the New Mexico Oil Conservation Commission, would it not be reasonable to assume that no conflict would arise if the Federal Power Commission took jurisdiction over such activities of the Phillips Petroleum Company?

* * *

[4116]

PRESIDING EXAMINER: Do you understand the question? Do you think you can answer it?

THE WITNESS: Yes, sir, I think I understand the question. I think he means that if Phillips Petroleum Company is a producer and a purchaser and if El Paso is also

a producer and purchaser—now, if those are the only two things we are taking into consideration and if that is so, why, sure, if one company comes under the F.P.C., so should the other one, if those two things only are true.

That is basic, I think. What is fair for one must be fair for the other one.

* * *

[4117]

Q. You stated in answer to a question asked of you by Mr. Chumbris that the price at the wellhead in your opinion had an effect on conservation of natural gas within the State of New Mexico, is that not correct? A. I stated that it did?

Q. Yes. A. Yes, I did.

Q. Would you say that the price of the market wherein natural gas is sold also has an effect upon the conservation? A. I would stick to my original contention, that the price of gas at the wellhead is very definitely a factor in conservation.

Q. Well, this— A. (Interrupting.) The person who sells the gas at the wellhead doesn't know or care what the price of gas is somewhere else.

* * *

[4122]

Q. To return to your statement that the price at the wellhead affected conservation, what is there about the price and what effect do you feel it has on conservation? A. Well, it just means that casing-head gas will be gathered

instead of flared. Now, that is simply and basically all it means.

Q. You mean that if the price is high enough that the gas will be gathered instead of flared?

Q. You answered yes, did you, to my last question?

A. Yes, I did.

Q. I think you shook your head and the reporter can't get that. A. Oh, I'm sorry. Yes.

[4123]

Q. Is it not that when you say the price is sufficiently high to bring about greater conservation, in other words, if the gas is gathered instead of flared, do you not mean that there is sufficient profit for that to be done? A. There must be profit as an incentive for any venture.

Q. But I mean sufficient profit. Do you mean the price is high enough so that it would pay— A. (Interrupting.) To lay the gathering lines to pick up the flare gas, yes.

Q. And that is why the price at the wellhead affects conservation, because it affects conservation in that if it is too low to make it nonprofitable to lay the gathering lines, they will not be laid, and if it is high enough to make it profitable to lay the gathering lines, they will be laid? A. That is correct.

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[4125]

BY MR. McALLISTER:

Q. I have one other question. In that relation to price which you say affects conservation, according to your theory

the higher the price the greater the conservation, does that follow? A. Within limits, yes.

Q. What are the limits?

[4126]

A. Well, I don't know. I don't know exactly what you mean. If you mean for me to define the exact price of gas—

Q. (Interrupting.) No, not the exact price, but what would be—you stated to Mr. Perdue a minute ago that the price had to be sufficiently high to provide for the laying of gathering lines and allowing something for the producer over and above his actual costs, is that right? A. Yes, sir.

Q. If you were to take all of these costs, gathering lines and drilling and what-not, and you allow him all of that and some return on his total investment, is that a sufficient price? A. Well, if you are talking about six per cent I don't think it probably is.

Q. What per cent would you suggest? A. I really don't know.

Q. I mean you were very definite in saying that the price affected conservation, and I'm trying to get a measure of price in relation to conservation upon which you based your answer. A. Percentagewise I really don't know.

Q. How much dollarwise then, or pennywise? A. I never laid a system of gathering lines.

Q. I know, but you were very definite in saying that

[4127]

that price affected conservation, you gave it some thought, didn't you? A. Yes, you must make a profit.

Q. But I mean what profit, 20 per cent, 50 per cent, annually? A. I'm not prepared to say. You've got to make a profit or else you don't do such things.

Q. I know, but what profit did you have in mind when you said that, a price sufficient to give them a profit, now, what profit did you have in mind? A. You'd have to go into a matter of the amortization of the pipe you laid and a few other things.

Q. Oh, yes, all of those costs. I have taken all those. He gets that without any question, whatever the proper costs are, amortization, depletion, operating expenses, income taxes, a salary for the man who has to do the job, all of those are expenses, I'm allowing all the proper costs of operation. A. Not being a business man, I don't know what a profit—

* * *

[4129]

THE WITNESS: I don't think I am prepared to answer the question, Mr. Examiner; as a geologist acquainted that well with finances would probably be a producer instead of a geologist.

BY MR. McALLISTER:

Q. You said the price affected conservation. Let me put it this way, if it was bare cost out of profit, would

[4130]

it aid conservation? A. Would what aid conservation?

Q. A price for the gas at the wellhead or at the gasoline plant, wherever you want to put it, so that you have the gathering lines and the processing plant and its bare costs,

would that aid conservation? A. I doubt that it would. There has to be an incentive.

Q. Now, how much of an incentive? A. Profit is the incentive. I am not prepared to say.

Q. Well, let me put it in another way, you don't want to answer that question with the limited knowledge that you have? A. That is right.

Q. And your thinking hasn't carried you that far, you just want price? A. Profit.

Q. You want a profit. But you don't know how much profit? A. No, sir.

* * *

[4132]

Q. When you stated in answer to certain questions here this afternoon that price was an aid to conservation, what price was it that you had in mind? A. I didn't have any price in mind. I said just a profit.

Q. Just a profit? A. Yes.

Q. But you don't know how much of a profit? A. I'm sure it varies.

Q. Can you give me some limits? I don't want a figure down to a decimal point, but give me a range. A. I have no idea.

Q. You have no idea of a range? A. No, sir.

[4133]

Q. Pursuing that in another way, is it your concept that a producer, if he can get it, can get the highest price possible for the sale of his gas without limitation? A. That is what I would try to do if I were a producer, yes.

Q. I mean as a conservation man, you are an official of the State of New Mexico now, and is it your concept, so far as conservation is concerned, that the producer in the state who sells his gas must get the highest price without limitation that he can possibly exact in the sale of that gas? A. That is the way it operates, yes, sir.

Q. And that is what you were speaking for? A. Yes, sir.

Q. And you don't think that there should ever be any limitation upon that highest price that he can get? A. As long as the price is determined in an open market between a buyer and a seller, I think that he should get as high as he can.

Q. And if I have a field or you have a field and it is the only available gas within a limited area, then you or I, in selling that gas, should use our position to get the

[4134]

highest price possible and that is O.K. in the field of conservation? A. I don't think the price should be exorbitant, but I think you should get as high—

Q. (Interrupting.) When does it get to be exorbitant? Who is going to determine that under the theory you have advanced? A. Well, I really don't know.

Q. You don't know? A. No.

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[4144]

JACK K. BAUMEL

resumed the stand, and having been previously duly sworn, was examined and testified further as follows:

Cross-Examination by Mr. McAllister

* * *

[4178]

Q. Sure. Mr. Baumel, do you get reports on the price of gas in these various fields that are under proration? A. We don't, not in any field except the West Panhandle field.

Q. You get the price on that? A. Under statute, I believe, of 1948, the legislature told the Commission to hold hearings every six months in the West Panhandle to ascertain the price of gas for that field and we do that every six months, and that is the only field in the state in which we do that.

Q. Is it just for the gratification of certain members of the legislature, or do you do anything with the price when you find it? A. We just ascertain it and issue our order setting out—

Q. (Interrupting.) Setting out the price for what purpose? A. My interpretation, that is just my interpretation, of that order, it would be so that any well which is unconnected and if it gets a market for carbon black, why, the carbon black company has to pay that price which is equivalent to the price ascertained for gas into a pipe line.

[4179]

Q. What price is it that you determine there? Is it an average price, the going price or the weighted average or what.

Q. Haven't you sat in on any of those hearings? A. I have sat in on every one we had and I haven't been able

to interpret the statute as to whether we should find the average price, the going price or the weighed average or what.

Q. Which do you do, under your orders what do you do? A. Well, the last order we just listed the going price for every company, and we let the operator determine the average price, we didn't determine it.

Q. You didn't determine that? A. No, sir.

* * *

Q. The reason I asked you, that price must be a big help to you in your conservation work in that field, isn't it? A. The only help it would be is we know that the higher the price the more conservation we will have in that we believe that the value of that gas increases and there will be less and less regulation to try and make them

[4180]

conserve it.

Q. Let's take the West Panhandle field. Have you found that to be true? A. On the price we ascertain?

Q. No, I mean the question of as the price goes up you have less and less to do with conservation in that field? A. Yes, sir, we can show you records from way back in 1946 to '50 where as the price had increased there was very little gas being flared. In the early days of the Panhandle field large quantities of gas were wasted, billions and billions of cubic feet.

Q. Was that because of price or because of lack of outlet? A. Well, lack of outlet—

Q. (Interrupting.) You mean you get more outlets as the price of gas goes up? A. Yes, sir, that is correct.

Q. That isn't true, is it? A. Your question, is if you get a bigger price.

Q. (Interrupting.) As the price goes up you get more outlets? A. Well, if you have more outlets you have more competition.

Q. Which was it, the chicken before the egg or the

[4181]

egg before the chicken? That is what it is, isn't it? A. Certainly if you have just one outlet in the field, then the producer is at the mercy of that outlet and he's have to take it whether it is one cent, two cents or three cents or zero.

Q. And by the same token when you swing around the other way, if you have one producer and one pipe line or two pipe lines in a field, the pipe lines are at the mercy of the producer? A. No, not necessarily. You have competition there.

Q. Why, if he has all the gas in the field? A. I don't believe that would be true. There is no one field where we have one producer owning all the field, in fee, or anything else.

Q. I know, but take the Texas-Hugoton, Exhibit 134-A. A. Yes, sir.

Q. Where one producer is in a dominant position, you say that won't effect—now, I am not saying what it is today, but if that was the position in the field and you went in there to buy enough gas for a pipe line— A. (Interrupting) Yes, sir.

Q. On the order of three and a half, three hundred fifty to five hundred million cubic feet a day. A. That condition does not exist in the Texas-Hugoton,

[4182]

you have more than one purchaser and more than one producer.

Q. I mean look at the figures there where the ratio is three and a half to one. A. Yes, sir, but still with that high ratio of Phillips, they still don't get what they nominate. They are still forced if they need the gas to buy from somebody else.

Q. That might be, but what I'm saying is, if there is only one outlet the producers are at the mercy of the pipe line. You say the reverse is not true? A. In this case there is not just one producer. If Michigan-Wisconsin believes they are at the mercy of Phillips, they don't have to buy from Phillips, they can buy from Kerr-McGee, and Shamrock or go on the West Panhandle and buy gas over there.

Q. As a practical proposition do you think that a pipe line can switch from field to field under the present pipe line set up in the State of Texas? A. Well, I—

Q. (Interrupting): Month to month. Just answer the question, and then I'll let you explain it. A. You want me to say yes or no and you can't answer that question yes or no.

Q. Go ahead and answer it in your own way. I didn't

[4183]

mean to hold you to a yes or no answer on anything. A. If Michigan-Wisconsin had made a contract to take that gas

from Phillips and if they can't get that gas from Phillips and if they need that gas, they'll have to interconnect. Under our proration orders they'll have to do that.

Q. You are arguing for your orders. A. Let's set aside our orders. We prorate oil, if a company can't get their allowable from their own connections, they'll have to interchange and buy from somebody else. The Michigan-Wisconsin line doesn't stop—true it stops in Texas-Hugoton, but it goes through the Oklahoma Hugoton and the Kansas Hugoton.

Q. But as a practical proposition would you tell me how they can get gas in those other fields? A. If it goes through those fields, why, and they can't get from the Texas side, they'll just have to take on connections from those other fields.

Q. But you think that works without consideration to the provisions of the contract? A. I don't see how it would breach the contract, if Phillips, under the regulations of the Texas Railroad Commission can't supply that contract, Michigan-Wisconsin would have to get gas some place else.

[4184]

Q. We are afield from what we started out with. You say if there is one pipe line from a field, the producer is at the mercy of that pipe line? A. Yes, sir.

Q. Those producers can sell that to some other pipe line in another field? A. That is correct.

Q. But as a practical matter, do they have the opportunity? A. They have the opportunity if they want to go out and lay their own lines to some place else.

Q. Then every producer in the state has equal opportunity to carry his gas to the point where he gets the highest price for it? A. That is correct.

Q. And the same would be true to a pipe line, they could go ahead and extend their lines to other fields? In theory that sounds good, doesn't it, but in practice it wouldn't work? A. Mr. McAllister, eventually that would have to come about just like in oil.

Q. I know, but we are dealing with the present, aren't we? A. Even with the present I can't say what the Commission might do tomorrow, the Commission might get an order out tomorrow and prorate the Texas-Hugoton with the West Panhandle field and in this case Kerr-McGee, Phillips and Shamrock

[4185]

would not be able to get their demand at all from the Texas-Hugoton field.

Q. If you did that you would make that order effective down the road 12 months to give people an opportunity to rectify their operation? A. I don't know whether we would make it tomorrow or six months. Assume they made it in six months. In order for Michigan-Wisconsin to lay line someplace else, they'd have to go through you to get a certificate of convenience and it may take six to eight months from you.

Q. That is right, or maybe Phillips would have to get that certificate? A. I don't know. I imagine if you classify them as a natural gas company they would.

Q. Well, it wouldn't take Phillips any longer than it would Michigan-Wisconsin, would it? A. That is right, and

in that case they still wouldn't be able to supply the contract.

Q. I mean it is a practical proposition. No one is going to lay down any rules just to embarrass somebody? A. No, I'm just saying that that is what the Commission will eventually do. We have been discussing that, and they can get out an order, effective today, maybe effective September 1, I wouldn't know.

Q. But no order of that kind would be very effective if,

[4186]

within that time, due to pipe shortages or one thing or another, the necessary connections were not being made or cannot be made? A. That is correct.

Q. I mean those are problems that would have to be worked out, it can't be an arbitrary order, it would have to be sensible? A. That is right, all our orders have to be reasonable.

Q. When it comes right down to the last consideration your main objective in providing the rules and the allowable from each field is so that as to each producer in the field and each one, each purchaser in the field, they get a fair shake?

MR. SPARKS: Are you limiting your question now or is that as to all fields, Mr. McAllister?

MR. McALLISTER: I'm putting it in all fields. I don't make it that way, but there is no reason why it shouldn't be equally applicable to all fields, as far as I know. I think it will apply equally to one field or all fields.

PRESIDING EXAMINER: Read the question.

(The question was read by the reporter.)

THE WITNESS: I believe I stated that the Commission in prorating gas prorates to prevent waste or to prevent confiscation of property. In the absence of waste, it is to distribute the allowable ratably so that all wells will get a fair share in the market.

BY MR. McALLISTER:

[4187]

Q. Yes, where there is waste— A. (Interrupting) The Commission will reduce the purchasers nomination of the take of the field to the most efficient rate of the field and distribute it ratably under the allocation formula irrespective whether that M.E.R. meets the market demand or not.

Q. That is right, but I mean so far as the producer or the purchaser— A. (Interrupting) It is distributed ratably according to the allocation for the field.

Q. So that statement I made would apply equally to all fields where you have prorated them? A. That is correct, our orders have to be fair and reasonable to all fields. We can't prorate one field and then using a similar order in another field, disregard the Commission's rules and regulations or allocation formula for that.

Q. Now for getting down to the point, a great deal has been said here about price being a dominant side which favors conservation. Can you give us an example of that in a practical way where you have seen it work? A. I thought you asked me that yesterday and we went over it, but I'll go over it again.

Q. I mean we did go into it a certain amount as far

as flare gas is concerned. A. Yes, sir, and I believe we also went into that insofar

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as we stated that the price has a great deal to do in premature abandonment of marginal wells and also that drilling of marginal acreage and in in-fill drilling in fields.

Q. You mean between the spacing? A. Yes, sir.

Q. Between normal spacing when the pressure gets down to relatively low pressure? A. Even normal spacing or greater spacing, our spacing orders are minimum spacing rules. An operator doesn't have to drill a well on 10 acres if he has six forty.

Q. No. Is it your position that the price should be such that will permit all this marginal drilling? A. I wouldn't say that the price would permit. I believe the price should be high enough which will be an incentive to the operators to continue to produce these marginal wells to the least economic limit he can afford to and at the same time go back in and redrill or rework those wells which will permit him to produce his gas. I don't know whether it is a high price or a low price. I am saying the price has to be high enough to be an incentive to him to go back in and do that work.

Q. Now, we'll take an ordinary field here, and you could represent it by a block wherein the breaking point between cost and revenue would be represented by a diagonal line drawn from corner to corner. That would be an unusual field, but I mean it is representative of the question. Do get my point?

[4189]

A. Yes, sir.

Q. If you fix the price which would be at the extreme corner, then that would permit every single well in the field, no matter how far out of the down reaches of a horizon to produce and market that gas without loss, isn't that right? A. Well, you are speaking of fixing the price. I'm not speaking of fixing the price.

Q. No, no; I mean any price that is fixed by reason of the action or normal concepts or competition and so on in the field? A. Well, I'm only speaking in terms of the going price or a competitive price.

Q. Well, that is a competitive price because the fellow says I have this field and I'm not going to sell any gas in it until I get that price which is up at the top corner, which will permit me to recover every bit of gas in here, when I get that I'm going to sell the whole field? A. That is right, if the operator fixes that point, assuming 25c a thousand and he has made a calculation which shows him that under 25 cents he can afford to do all the drilling, that is correct.

Q. That would be what you would say would a price that would assure the maximum in the way of conservation? A. Well, it may and may not.

Q. Well, why not?

[4190]

A. It may be that at 35 cents it might still be better for him to go back and do the additional recovery.

Q. Then you'd want to put it above 35? I want to see how far up the road you want to go on this thing. A. It all

depends when the operator sets that price as to whether he considers secondary recovery and so forth or repressuring or compressing the gas and so forth and so on. If he has taken all that in consideration, then I would say that was all right.

Q. It is a price approaching that which you recommend, as I understand you, as being a price which will aid in conservation? A. Well, it might aid in conservation so far as the particular field is concerned, but as far as increasing our reserves or additional drilling for gas in other fields that price may be low, so you couldn't very well say that this 25c as far as that field is concerned would be a criterion so far as conservation through the state.

Q. Is there— A. (Interrupting) Certainly if gas would be at a dollar a thousand cubic feet it would be an incentive to the present oil operators to quit drilling for oil and start drilling for gas and we would double our reserves and doubling our reserves in gas the price would be long.

Q. I mean if there was that much gas you could double

[4191]

your reserves that would be the effect? A. That is right.

Q. You don't have that assurance? A. We tried to put that exhibit in and you ruled it out. We wanted to show that since 1945 and 1939 as the price had gone up, it more than doubled the wells in Texas alone.

Q. I know, but you know full well there have been hundreds of wells drilled in places merely to develop gasoline to exist in a reservoir to provide gas for a pipe line? A. I believe in the early days when they drilled for gas they drilled for gas and found oil.

Q. I know, you said the last five years? A. They drilled gas because the price had gone up. The price at the wellhead had increased and it was an incentive to the operator to do additional drilling.

Q. Of course, that is easy to argue, but you know they drilled, Phillips has drilled gas wells, to be practical, on known acreage to supply gas to Panhandle Eastern Pipe Line Company where the selling price was four cents? A. Yes, sir; but if the price had gone down to two cents they wouldn't have drilled those wells.

Q. Are you sure they wouldn't? A. I am pretty sure they wouldn't. I know if I was them I wouldn't have done it.

Q. I know, but that was the price and they drilled at that

[4192]

price and if you had an outlet at two cents and the well was drilled, who is to say that it wouldn't have been sold at two cents? A. That is true, they would have sold the gas at two cents but whether or not it would be feasible for them to go along and recover all that gas in that well up to 50 pounds abandonment pressure is another question.

Q. That is another question. Don't get the idea that I am favoring smaller and smaller prices no matter where they go. It is just like you said yesterday bigger and better pipe lines would provide a market for the gas in Texas? A. That is right.

Q. But just as bigger and better pipe lines will provide a market for gas in Texas, so also a fair price for the gas in that pipe line will promote the sale of gas at the

other end? A. That is correct, but, then, in turn if the producer and gatherer, processor has a field that some outside agency will step in and put in a ceiling or a minimum on that price, that is another question, and it is going to affect a great deal of additional recovery of reserves and additional gas for those pipe lines, irrespective of how many pipe lines we have through the state. You are going to lose more gas going into those lines, if they are afraid to put the gas into those lines.

* * *

[4228]

Q. Yes, that is right, but you assumed that the price would be so low that he would not be able to meet those costs? A. That is correct.

Q. But if on the other hand you assume he has allowed a price or a price is fixed, if it is fixed, which will compensate for all his out of pocket costs, carrying costs and some profit, although some may say it would be inadequate, this answer that you gave was not in consideration of a situation such as I have described? A. Well, it could be if you went ahead and fixed the price at that particular time where he could just make it pay for his cost or a little bit profit.

Q. Let's make it an adequate profit? A. All right, an adequate profit, and then his other operating conditions as far as production of his oil wells were increased, so the cost of producing that casing-head gas increased, and you held him down to that price which you fixed, he'd have an alternative to shut in his oil operations because he couldn't afford to take the price which you fixed.

Q. Supposing he by contract had fixed that price and then

[4229]

he runs into this situation, he'd be in the same dilemma then? A. That is correct. If he made his own bed, he'd have to lie in it.

Q. I may say it may say it may have just as many thorns as the other one we were talking about, is that right? A. Under the other thorn he couldn't help himself, but under the contract he could wait and when the contract expired he could raise it, but under that same contract which you speak of, he is under the dilemma that we forced him into making that contract if we insisted that he put that gas into a line or close his oil wells, he wouldn't have any alternative as an oil operator to lose a hundred barrels of oil a day at the expense of three hundred thousand or five hundred thousand cubic feet of gas. In that case he would take any contract to keep his oil wells going.

Q. I mean whereby your order you force him to do that, are you implying that you would relieve him from a bad contract that he might make? A. No, sir, we wouldn't relieve him. We would insist that those oil wells, that that casing-head gas, be taken into a line and utilized under legal purposes or be put back into the ground.

Q. Well, under the question that I put to you I said where later on a price was established at a low figure, those were the words of you answer—

[4230]

A. (Interrupting) Yes, sir. What I meant in that connection was that assuming he had laid his connections and

gathering system and attained a price, say, of six cents or some other agency—

Q. (Interrupting) Call it FPC because everybody is thinking about them anyway. A. All right, say, FPC declared him a natural gas producer and went into the rate basis and found he should have three cents, he would be in that dilemma I just stated.

Q. But if on the other hand, the Federal Power Commission giving full consideration to all costs and fair return, fixed that six cents, he'd be right where he was?

* * *

PRESIDING EXAMINER: Answer the question.

THE WITNESS: That is correct, yes, sir.

BY MR. McALLISTER:

Q. And you haven't any reason to believe that the Federal Power Commission would not be fair and reasonable, have you, in the exercise of any authority that is required by law to exercise?

MR. SPARKS: It is argumentative, Mr. Examiner.

[4231]

MR. McALLISTER: I'm asking if from his experience.

MR. SPARKS: He has not been regulated by the Federal Power Commission as a natural gas company. How does he know how he might have been treated if he had been.

PRESIDING EXAMINER: The objection is overruled.

THE WITNESS: I don't believe I have stated throughout my examination here that the Federal Power Commission would be unable or wouldn't be unreasonable.

BY MR. McALLISTER:

Q. Your dealings with them haven't been such but to believe that they are fair? A. That is right.

Q. You would be willing to say you believe them to be fair? A. I believe them to be fair on what they have been doing, that is, the regulation of gate rates as far as pipe lines are concerned.

Q. And as far as issuances of certificates are concerned and other matters coming under their jurisdiction? A. That is correct, yes, sir.

* * *

[4232]

Q. Generally speaking you don't know when you are going to get a marginal well, do you, until after it is drilled?

A. That is right, you don't know when you are going to get a well at all until you drill it.

Q. That is correct. How is this price going to

[4233]

effect marginal drilling? I mean it will affect any drilling, but why did you relate it to marginal drilling? A. It would affect any drilling, but by marginal drilling I meant infill drilling or acreage which an operator had found by previous drilling that it was marginal acreage. In other words, if he went ahead and drilled the first well on that acreage and found it to be 200 thousand cubic feet potential well, which would fall in the category of a marginal well, he would then instead of continuing to drill that acreage he must move up on the next contour or down the next contour to try and pick up larger potential wells.

Q. Or he might drill another section there because he might feel that that was just one of those unhappy experiences that you sometimes encounter in the oil and gas business? A. That is right, yes, sir. And then that marginal acreage under a depressed price, he would just hold that in abeyance until he could afford to go back in and do additional drilling.

Q. Well, it is just like a farmer who has a certain amount of land that is down around a creek bottom and it is flooded every now and then and one thing and another, and then the price of wheat or cotton is high, why, he takes a chance and plants it and other times it isn't worth

[4234]

the chance and he just passes it by? A. That is correct. That same thing will apply to any industry.

Q. It applies anywhere. It is a question of price in relation to possible production? A. Yes, sir, that is right.

Q. And it is the incentive that arises from the possibility of greater gain to the higher price? A. That is correct. That can be pointed out in many instances and instances in oil, that the price of oil now of two dollars and sixty-five cents, we are producing greater and greater of those stripper reserves, while at a dollar a barrel it might not have been feasible or economical to continue to produce the wells.

Q. And when it drops below a dollar as it did back in the '30's— A. (Interrupting.) We abandon them completely.

Q. And there would be none of that oil recovered? A. That is right.

Q. So the economic price recovered for gas is a variable that depends upon many conditions? A. The economic price?

* * *

[4241]

Q. The Panhandle Eastern Pipe Line was built, the Cities Service built lines out, the Canadian River and Colorado Interstate, Natural Gas Pipe Line Company, and Texoma and some of those lines began taking volumes of gas which at first didn't substantially take up the full volume, but as the markets grew they made a dent, you might say, in the supply and the price began to be, the price for gas began to be, a reality rather than a nullity? A. Yes, sir.

Q. Now, it would be pretty hard for a person without a very detailed study to say whether it was the price increase that caused the market or whether the market was what increased the price, isn't that right? A. That is just like the example you gave whether the chicken laid the egg or the egg—

Q. (Interrupting) Yes, it is pretty much that thing, isn't it? A. That is right.

Q. And today availability of markets will do as much or more for conservation by making available full complete facilities to take care of all flare gas or excess gas production than will price alone, isn't that right? A. I believe both of them will go hand in hand.

[4242]

Q. Both of them go hand in hand? A. That is right.

Q. As a matter of fact, have you ever thought of the proposition that if casing-head gas could be purchased at a slightly lower figure than gas well gas that the pipe lines might be able to exert themselves more to acquire that gas and take it out in the interest of conservation and save the gas well gas? A. That is correct, that is right, that happens, I believe, every day our fields in Texas. If a pipe line has made contracts in a field to dry gas and at the same time has obtained contracts in the field for casing-head gas at lower price than dry gas well gas, they will only take so much gas from the dry gas wells to hold the contract, but will take moves of their gas from the casing-head gas.

Q. And that will be a distinct aid to conservation?
A. Yes, sir.

* * *

[4244]

Q. And you are familiar, are you not, with the operations of the Panhandle Eastern Pipe Line Company in some respects, have been subject to the jurisdiction of the Federal Power Commission over the years in the past? A. That is correct, insofar as the Federal Power Commission in fixing them, as a transmission lines, the gate rates.

Q. And so far as certificates of convenience and necessity are concerned? A. Yes, but you don't fix their rates at the wellhead as a producer or gatherer, do you?

Q. I'd like to ask you a few questions and I'll go up there and you can come down here maybe. A. All right, go ahead.

Q. With respect to some of the other operations of the Panhandle Eastern Pipe Line Company, they are under your jurisdiction, as far as the production and gathering of gas as I outlined they are under our jurisdiction.

Q. Has there ever been any conflict that you know of between them? Have you encountered any rule, regulation or order

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of the Federal Power Commission that in any way interfered with the exercise of what you consider to be your proper functions in regulating or laying down rules applicable to the operations of the Panhandle Eastern Pipe Line Company in the State of Texas? A. There hasn't been any to date insofar as the production and processing and gathering of gas is concerned, no, sir.

Q. Would your answer be the same with respect to the operations of the Texoma Natural Gas Company? A. Yes, sir, Texoma Natural Gas Company, you exert your jurisdiction so far as a transmission line in fixing the gate rates. The Railroad Commission exerts its jurisdiction only so far as the production, gathering and processing of the gas and there is no conflict between the Railroad Commission and the Federal Power Commission as to that.

Q. You are stating what you do with respect to Texoma Natural Gas Company and the Federal Power Commission may do a little more than you have outlined? A. Yes, sir, I am just saying that as far as granting them the certificate of convenience and necessity and fixing gate rates, why—

Q. (Interrupting) Prescribing accounts— A. (Interrupting) And so forth, that is your jurisdiction, yes.

Q. Texoma is a producer and gatherer in Texas? A. Yes, sir, they produce and gather the gas in Texas.

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Q. And they also process it? A. Yes, sir, they process it.

Q. And the Canadian River Gas Company is in the same situation? A. Yes, in the same situation as the United Gas Company would be or the Lone Star Gas Company would be.

Q. The Lone Star Gas Company does not produce? A. Well, they have a producing company, the same situation at United Production Company.

Q. That is right, but Lone Star does gather the gas that is produced by the Lone Star Producing, Lone Star Gas Company does gather the gas produced by Lone Star Production Company? A. Yes.

Q. And Lone Star Gas Company processes the gas through gasoline plants which are operated by Lone Star Gas Company? A. Yes, sir, that is right.

Q. And Canadian River Gas Company some years ago—I said some years ago, after proration order in the Pan-handle field in '48, the latter part of '48—encountered difficulty in providing the volume of gas that they required to their markets, is that right? A. Yes, sir.

Q. And they have an obligation to Colorado Interstate to deliver a certain volume of gas to them and Colorado Interstate had an obligation to deliver certain gas to Natural Gas Pipe

[4247]

Line Company of America, or are you familiar with that?

A. I am only familiar insofar as that prior to that Commission Order of 1948 in which we lumped the west sweet and west sour in prorating it as one field, that prior to that Canadian River Gas Company drilled very few wells on their acreage and they could produce all their market demand from their own wells based on 25 per cent of open flow. When the Commission began in September 1948 to prorate the west Panhandle field as one, that is, including the sweet and sour under the allocation of two thirds acreage plus one third potential, Canadian River Gas Company protested that formula and sued the Commission. We insisted that the proration unit is 640 acres, if they wanted additional gas they had an opportunity under our order to drill their acreage to six forty and by doing so they could not only end up with their own market demand but increase their ability to produce gas from their acreage.

Q. That is right. And when your order stuck, let's put it this way, they weren't able to upset it— A. (Interrupting) They started drilling wells.

Q. But in the meantime they were unable to meet their market demands and had to go out and buy gas elsewhere?

A. Well, that is the purpose of proration. If they can't get it from their own wells and connections they have interchange or lay lines—

Q. (Interrupting) I said there they had to go out and buy

[4248]

other gas. As a matter of fact, they didn't, they cut back on their production, but Natural Gas Pipe Line and Texoma, who were short, had to go out and buy gas? A. That is right.

Q. And you know that Canadian River produces gas from a great number of wells, it gathers the gas from those wells, it processes the gas and then carries it some distance beyond the processing plant to a connection with Colorado Interstate Gas Company? A. Yes, sir.

Q. As a producer and gatherer and processor, the Federal Power Commission has fixed the price at which it is to sell that gas to Colorado Interstate, you know that? A. I didn't know that they fixed it at the wellhead as a producer?

Q. (Interrupting) I didn't say that. They fix the price at which the gas is sold by Canadian River to Colorado Interstate—

MR. SPARKS (interrupting): Mr. Examiner, if they have, they have, and I assume it is part of the official record of the Commission. I don't see any necessity for proving it of this witness?

THE WITNESS: I don't know.

PRESIDING EXAMINER: The witness said he didn't know.

THE WITNESS: I don't know.

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MR. SPARKS: I'm sorry, I didn't hear his answer.

BY MR. McALLISTER:

Q. If it is a fact that the Federal Power Commission has done as I have stated, has that operation by the Federal Power Commission interfered in any way with your exercise of your authority within the State of Texas? A. It hasn't as far as our agency is concerned, but it has with other agencies.

Q. You are not speaking for them, are you? A. No, but it has insofar as when we fix the price in the Panhandle field, west Panhandle, ascertained the price, they have been kicking to us and to the other agencies that they couldn't pay the taxes on that price.

Q. On which price? A. On the price which we set at four and a half cents and you, I believe, had told them at three and a half. We insisted that there it was the four and a half.

Q. And they paid on that basis, and the Federal Power Commission never said that any other price should be the basis for your taxes, did they? A. No.

Q. It is one of those things where a fellow is trying to save his own hide and he is likely to blame most anybody if it will help him, is that right? A. I presume it is right.

[4250]

Q. But eventually he paid the taxes based on the price which you fixed in the State of Texas? A. But there is a conflict, it seems to me, as to what should be the price there.

Q. We can argue that there is a conflict, but has it in-

terfered with your exercise— A. (Interrupting) Oh, no, it hasn't interfered with our exercise.

Q. And to the extent that Texoma operates as a producer and gatherer of gas in the State of Texas and delivers that gas to Natural Gas Pipe Line Company, after having processed it, I mean after Texoma processed it, has that operation of that company as a producer and gatherer in any way by reason of the authority of the Federal Power Commission of it refused or failed to comply with all of your rules and regulations regarding production and gathering and processing? A. They haven't failed to comply with our rules as far as production and processing or gathering, no.

Q. You stated here the other day that if the Federal Power Commission took jurisdiction over Phillips— A. (Interrupting) I don't believe I testified that—

Q. (Interrupting) May be you didn't. I mean it has been said here. You haven't said that, let's cut it short that way? A. I haven't said anything like that on the record. I don't believe I have.

Q. I appreciate it, but I have read so much along that

[4251]

line that maybe I just picked it up and thought you had. I appreciate your correcting me. In addition to Texomas Natural Gas Company, Canadian River Company, Panhandle Eastern Pipe Line Company, I'm going to read some others who are producers and gatherers in the State of Texas as I understand it and who also operate under your jurisdiction and are likewise natural gas companies—I'm

going to read them all and ask you to say whether you have experienced any difficulty because they were regulated to a certain extent by the Federal Power Commission within the provisions of the Natural Gas Act, and those companies are Southern Union Gas Company, Texas Gas Utilities Company, Consolidated Gas Utilities Company, Northern Natural Gas Company, Arkansas-Louisiana Gas Company and Cities Service Gas Company, now, all of those companies are natural gas companies under the jurisdiction of the Federal Power Commission and we regulate certain of their functions? A. You just regulate them insofar as fixing the gate rate.

Q. Don't tell me how far we do because I'd have to differ— A. (Interrupting) No I'm asking you that, aren't you regulating them just insofar as fixing the gate rate, you are not regulating them insofar as production, processing and gathering?

Q. No; as I said the other day, so far as I know we will never understand to have anything to do with production. A. Then certainly there hasn't been any conflict there.

[4252]

Q. But regardless of what our jurisdiction has been across the board on all of these companies, you have never found any of them attempting to hide behind any of our orders as a reason for avoiding your regulations? A. No, sir, I believe I stated we haven't had any conflict, so far as production and processing and gathering was concerned. As I state, so long as you haven't regulated them as far as the production and processing and gathering of gas—

Q. (Interrupting) But so far as Canadian River was concerned we did— A. (Interrupting) Is that a gate rate or what? I don't know.

Q. It is a gate rate, but included in the price at the gate were all of their costs up to that point, but the only point I am asking you about is not to discuss the principles we follow, whether they are right or wrong, but what I'm asking you is the result of that, what we did, has never interfered in any way so far as you know with the exercise of your proper authority in the State of Texas? A. No, sir; if they would refuse to follow a rule or regulation we'd shut them in as any other company.

Q. And when you shut in their wells you never heard the Federal Power Commission claiming they had any authority in that regard? A. No, sir.

[4253]

Q. Or as to the spacing of wells? A. No, sir.

Q. Or as to the allowables out of any wells? A. No, sir.

Q. In addition to those I have given you there some in the State of Texas that have gathering lines and gasoline plants and I think in questioning Mr. Murray, I mentioned three gasoline plants of the United Gas Pipe Line Company, do you recall those? A. I believe you mentioned Augua Delces, Refugo and Carthage, yes.

Q. They have the gathering lines at the gasoline plants? A. Yes, sir.

Q. And United Gas Pipe Line, you know, is a natural gas company under our jurisdiction. As far as you know, nothing that the Federal Power Commission has done in

its regulation of United Gas Pipe Line has interfered with your proper authority and regulation of these gasoline plants, or gather lines or anything, has it? A. The same answer I gave before would be the same in this case in that insofar as gathering and processing and production of gas there hasn't been any conflict, no.

Q. There hasn't been any conflict at all, so far as you know? A. No, no, to date I don't know of any.

Q. Well, of course, somebody could get off base in the

[4254]

future, you know.

Q. El Paso Natural Gas Company also has a small plant in Texas, does it not? A. In the San Salvador field in Southwest Texas.

Q. And I presume you have been getting along all right with them in the regulation of their gathering and processing down there? A. Well, we have in a fashion, yes.

Q. Are you having any trouble with them? A. That is not to put on the record.

Q. But it isn't the result of any conflict with the rules and regulations of the Federal Power Commission, is it? A. No, sir, it is just our jurisdiction of production, gathering and processing.

Q. It comes under that and you have a little difficulty with them as you do with others from time to time? A. Yes, sir.

Q. But it is not the result of a conflict between your jurisdiction and the jurisdiction of the Federal Power Commission? A. No.

Q. Are you familiar with the operations of the West Texas Gas Company? They have a gasoline plant they call Wilhelm plant in West Texas, in the West Panhandle, not West Texas? A. Yes, sir.

Q. And they have gathering lines and a gasoline plant?

[4255]

A. Yes, sir.

Q. Would your answer be the same with respect to them so far as any conflict with— A. (Interrupting) That is correct, yes, my answer would be the same insofar as the production, processing and gathering of gas.

Q. And West Texas Gas Company, I presume you know, and if you don't know, I'll state that the orders of the Federal Power Commission will show it is a natural gas company and subject to its jurisdiction? A. I didn't know that company was under that jurisdiction.

Q. I mean it shows— A. (Interrupting) If your record shows that, then it is.

Q. I mean to say, though, it shows how completely you can operate in your sphere and never be concerned with the regulation of the Federal Power Commission in its proper sphere, isn't that right? I mean when you didn't know about it? A. Insofar as the jurisdiction is concerned, the Federal Power Commission staying in its bounds so far as fixing the gate rates on transmission lines and the Railroad Commission staying in its end of production, gathering and procession is concerned, I'll agree with you.

Q. The Federal Power Commission has been in exist-

ence for about 13 years and they haven't extended into your domain yet, have they?

[4256]

A. That is why we are here, a fear of what they might do.

Q. It is the producers and gatherers we are talking about and we are— A. (Interrupting) Yes, but only insofar as fixing the gate rates on the transmission lines, but during those 13 years you haven't been down here telling us as to what we should do or haven't done anything concerning production, gathering or processing of gas.

Q. Well, is there any thought now that we are going to make the practice that they have— A. (Interrupting) That is what our fear is.

Q. But it is only fear, it is not based on any experience in the past? A. We can just—

Q. (Interrupting) It is just fear? I mean let's call it concern. A. That is right, it is our concern, because that fear exists in a number of producers who are now having large gas reserves in the neighborhood of from 13 to 15 trillion feet and the public cannot avail themselves of those reserves because that company is afraid of the Natural Gas Act.

* * *

[4260]

Q. (Interrupting.) You are saying the higher the price is at the wellhead the more conservation we will have and the more gas will be used? A. Yes, sir. Let me say this, that if the purchaser is willing to pay five cents and the

gas at the wellhead was two cents, I believe he wouldn't have any trouble at all to buy all the gas he wanted to in that field or any other field at five cents.

Q. All right, but I suggest to you that you really mean the price at some delivery point where there is a purchaser willing and able to buy it at rather than the well-head price. A. I am speaking only of wellhead price.

MR. TULANE: Mr. Examiner, may I have my statement read back and I request the witness to state whether or not he agrees with it.

[4261]

PRESIDING EXAMINER: Read the question.

(The last question was read by the reporter.)

A. No, when you say delivery point, you are assuming that if the purchaser at the wellhead had gas to sell and over here was a gatherer—

BY MR. TULANE:

Q. (Interrupting.) Just a minute. Purchaser who wants to buy gas. A. All right, a purchaser who wants to buy gas, if he wants to get that gas from this well, he either has to lay the gathering line to get it or the producer would have to lay the gathering line.

Q. I understand that perfectly. A. All right. So the purchaser who wants to pay five cents for the gas and lay that line, he can get that gas all he wants to.

Q. I don't doubt that, but if the producer lays the gathering line and has to bear the expense and delivery of that gas to some point on the line, then that is not a well-head price, is it? A. That is right, that then becomes a part

of your production system. You can't segregate the gathering system from the well, because to produce the gas into the line, you must lay a gathering line.

Q. Exactly, and when you say the price influences

[4262]

conservation, you mean that the price at this transfer point must be such that whoever has to bear the cost of the gathering system did pay for it? A. Certainly; it isn't feasible—

Q. (Interrupting.) That is enough.

MR. CRENSHAW: Let him explain his answer. He is not confined.

MR. TULANE (interrupting): Mr. Examiner, would you allow me to ask my questions and allow counsel to bring what he wants to up in redirect examination?

PRESIDING EXAMINER: I think you can do that.

MR. CRENSHAW: He wanted to qualify his answer—

MR. TULANE (interrupting): He said certainly, and that was all I wanted.

PRESIDING EXAMINER: Do you want to qualify your answer?

THE WITNESS: I certainly say it would not be feasible for him to go get the gas to market unless he can go ahead and lay the gathering system.

PRESIDING EXAMINER: Read the question and answer, please.

(The next to the last preceding question and answer were read by the reporter.)

BY MR. TULANE:

Q. So then you are not really talking about wellhead

price when you say that price influences conservation?

A. Well, if I understand you, you want me to cut

[4263]

off the gathering of gas from the wellhead gas?

Q. No, I want you to put it in. A. All right, if I put it in the only way you can get this gas into any line is for that price to be such that he can afford to lay those lines.

Q. Yes, but the point is this, that if the owner has had to pay for the gathering lines he gets one price. If the collector pays for the gathering lines he will not pay as high a price, will he? A. That is correct, but it is synonymous there. I can get the gas for two cents a thousand if I don't have to make a big investment to lay the gathering lines, but if I am going to have to lay the big gathering lines, I'm going to have to get five cents a thousand. It is immaterial.

Q. But when you lay the lines yourself you are delivering the gas at a point away from the wellhead, are you not?

A. To the processing plant.

Q. And you are getting wellhead plus transportation for the length of the gathering line? A. I don't see how you can cut one off from the other.

Q. I think the record is clear on it anyhow. May I ask this question, then, when you say wellhead price, you do not necessarily mean the price paid for a sale at the head of the well?

[4264]

A. I mean the wellhead price would be the arm's length contract.

Q. I don't believe that answers the question. A. All right, I'll answer it. That is correct. I mean that what he could get at the wellhead, and if he has to lay the lines, then the producer will include that as his wellhead price.

Q. Is it your position in the conservation matters that the price which promotes conservation best is that price which encourages the use of all marginal properties, including marginal wells and marginal methods of production such as the use of compressors and vacuum system and such? A. That is correct; I believe in a price that would create the greatest ultimate recovery of gas for mankind or production of oil for mankind.

Q. You are not trained as an economist, are you, Mr. Baumel? A. No, sir, I am just a poor engineer.

* * *

[4277]

Q. If the Federal Power Commission assumed jurisdiction over Phillips and attempted to regulate the rate at which Phillips sold at the Sherman and Hansford plants—

MR. McALLISTER: The Sherman.

BY MR. TULANE:

Q. The Sherman. Would that in any way interfere with your allocation and proration orders? A. It wouldn't interfere with our allocation and proration orders, no.

* * *

[4286]

Q. I don't think that is responsive. I asked you solely if you are not regulating price today— A. (Interrupting) I think we went over it that at the present time the legis-

lature never has given the Railroad Commission power to set any price, minimum or maximum or whatsoever, so how can you ask me whether or not it is going to conflict. It wouldn't conflict if we don't have any power to set the price.

* * *

[4314]

T. E. SMILEY

was called as a witness, and having been first duly sworn, was examined and testified as follows:

Direct Examination by Mr. Sparks

* * *

[4331]

MR. SPARKS: Let the record show that in support of the tender of Exhibit No. 149 the witness, if permitted to do so, would testify as follows:

"The first column of figures under the heading '35 Natural Gas Companies in Southwest', was obtained from the files of F. P. C. in Washington, D. C., from the annual reports Form 2 except where otherwise stated. All Class 'A' and 'B' Natural Gas Companies reporting to F. P. C. which operate in the seven southwestern states of Arkansas, Kansas, Louisiana, Mississippi, New Mexico, Oklahoma, and Texas are included and are listed on the third page of the exhibit. The Public Service Corporation of Texas was included in

Class 'C' and 'D' companies during 1946 and 1947 and in class 'A' and 'B' companies in 1948 and 1949 and was included in the exhibit for all four years. Texas Gas Transmission Corporation was not included in the statistics published

[4332]

by F. P. C. for 1946 and 1947 and is therefore not included in the exhibit for those years but its predecessor, Memphis Natural Gas Company was included. Michigan Wisconsin Pipe Line Company, Renosa Pipe Line Company and Texas Eastern Transmission Corporation did not file annual reports with F. P. C. for 1946, therefore are not included in the exhibit for that year.

"The 'Net Investment' shown for the Natural Gas Companies is the 'Gas Utility Plant less Reserves' at the end of each year as shown in the statistics published by F. P. C. each year, and does not include Other Utility Plant or Other Property.

"The amounts shown as 'Land, Geological and Geophysical Expenditures' for the Natural Gas Companies represents the debits to account 142.1 'Preliminary Natural Gas Survey and Investigation Charges' as shown in schedule 240-A of the annual reports to F. P. C. by each company for each year plus the total of account 513 'Other Exploration Costs' as shown under Column 'F' of schedule 472 in the annual reports to F. P. C. by each company for each year. Account 513 has been changed to account 739.4 in the present

classification of accounts. From the reports it would appear that very little of this is actual geophysical surveys or

[4333]

geological investigation of possible new producing areas.

'The percents shown are the ratio of each class of expenditure for each year to the net investment shown for such year. For example, Land, Geological and Geophysical expenditure for the year 1946 for the Natural Gas Companies are shown as \$0.17 which is in Millions of Dollars and therefore represents expenditures of \$170,000. This amount was divided by the investment of \$753,900,000 which furnishes the percent shown as 0.02% in other words, 2/100 of 1%. All other percentages on the table for the Gas Companies, 30 Oil Companies and for Phillips Petroleum Company were determined in the same manner.

"Dry Hole Expenditures represents the total of account 511 'Non-Producing Well Drilling' as shown in column 'E' of schedule 472 of the annual reports to F. P. C. by each company for each year. Account 511 has been changed to account 739.2 in the present classification of accounts.

"Delay Rentals represent the total of account 510 (new account 739.1) as shown in column 'C' of schedule 472 in the annual reports to F. P. C. by each company for each year.

"Additions to Leasehold Investment was obtained

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from the annual reports of each Gas Company for each year by taking the total of the additions from column 'D' of schedule 400 for accounts 330.1 'Natural Gas Producing Lands'. Since many companies reported transfers from non-producing leasehold investment as an adjustment, the debits in the adjustment column of schedule 400 are also included unless they could be identified as a mere accounting reclassification or the result of a merger of companies. The gross additions for undeveloped leases is not shown in the annual reports, therefore the net increase or decrease was obtained by taking the difference between the balance at the end of each year and the balance at the end of the preceding year. Such balances were obtained from schedule 405 'Gas Plant Held for Further Utility Use' and were checked with amounts shown in schedule 479 'Natural Gas Land Acreage' as the cost of non-producing acreage in the annual reports to F. P. C. each year. Decreases in this amount could result from transfers to producing or from abandoned leases, sales, etc. Since some companies charged abandoned leases directly to expense whereas others provided a reserve for a portion or all of abandoned leases, it was necessary, in order to obtain the actual abandoned leases for each year, to take the total of account 512 'Abandoned

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Leases' (new account 739.3) from schedule 473 less the provisions for abandoned leases as shown in sched-

ule 416 plus the abandoned leases charged to account 250.3 'Reserve for Abandoned Leases' as shown in schedule 416 all from the annual reports to F. P. C. each year. This total of abandoned leases was added to the total additions to producing leases and the net change in non-producing lease investment; and from this total was deducted exploratory costs cleared to gas plant accounts as shown in schedule 240-A since such amounts duplicate amounts already included in Land, Geological and Geophysical expenditures. The total thus obtained should represent the total additions to leasehold investment, however, we noted that certain companies still resulted in a net decrease rather than an addition, therefore another trip to Washington was made to investigate these instances. It was found that sales of leasehold investment were often not reported in detail in the annual reports. Every effort was made to locate the cause of such decrease in leasehold investment by investigating docket files, reclassification entries, files of entries for purchases, sales mergers and etc. In some instances no explanation could be found and in such cases the net decrease for such companies for that year was eliminated so as not to reduce the

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expenditures of other companies. In the course of making this investigation, we also attempted to eliminate any additions due to mergers or liquidations of affiliated companies since such items would not represent

actual expenditures. The only major item of this nature located for the 35 Southwestern Natural Gas Companies was the liquidation of Sagamore Oil & Gas Company by the Union Gas Systems, Incorporated involving producing and non-producing leases in the amount of \$472,501.26 and gas wells in the amount of \$285,817.40 during the year 1949. The files of the Federal Power Commission in respect of purchases and acquisition of properties is not complete even though the Gas Companies are required to file copies of such entries. However, it is believed any other acquisitions of producing properties were merely normal purchases of a small number of wells or leases.

"Total Exploration Costs (Including Leasehold Additions) represents the sum of the expenditures for Land, Geological and Geophysical, Dry Holes, Delay Rentals and Additions to Leasehold Investment.

"Cost of Drilling and Equipping Producing Wells represents the additions to such investment as shown in column 'D' of schedule 400 for accounts 331.1 'Gas Well Structures', 332.1 'Producing Gas Wells—Well

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Construction' and 332.2 'Producing Gas Wells—Well Equipment'. Debit adjustments to these accounts shown in column 'F' of schedule 400 were also included. The additions by Union Gas Systems, Incorporated due to the liquidation of Sagamore Oil & Gas Company were eliminated from such additions as explained regarding additions to leasehold investment.

"Total Expenditures for Exploration and Development is the sum of the Total Exploration Costs and the Cost of Drilling and Equipping Producing Wells.

'30 OIL COMPANIES'

"The data for the 30 Oil Companies was obtained from the 'Financial Analysis of 30 Oil Companies' published by the Chase National Bank of the City of New York, Petroleum Department by Joseph E. Pogue, Vice President and Frederick G. Coqueron for each year. This is a statistical publication which is widely accepted in the industry as accurately portraying the statistical data published therein.

"The companies included were not chosen by us, but are all of the companies included in the study as stated in the report and are apparently considered by the authors as representative of the industry. Data for individual companies is not shown in the report. The net investment represents the net investment (less reserves) at the

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end of the year for all departments including Refining, Marketing, Pipelines and etc., as well as Producing, within the United States as shown in the report for each year, but does not include investments by such companies in foreign countries.

"The report for the years 1946 and 1947 did not furnish a detail of exploration and development costs but the report for 1948 included such expenditures in

Table 17 on page 16 which is shown separately for each of the years 1946, 1947 and 1948 in the following detail.

“Acquisition of New and Renewal Leases and Cost of Drilling and Equipping Wells (including dry holes)

“Exploratory Expense (including land, geological, and geophysical activities)

“Lease Rentals.

Total Expenditures

The detail of certain expenditures such as dry holes was not available from the report. The expenditures for the year 1949 were obtained from Table 15 on page 14 of the report for 1949 which shows the same data as for the 1948 report.

‘PHILLIPS PETROLEUM COMPANY’

“All of the data for Phillips Petroleum Company was

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obtained from the books, records and statements of the Company kept in the ordinary course of business. The net investment shown is the total net investment for all departments at the end of each year as shown in the Financial and Operating Statement of Phillips Petroleum Company and Subsidiary Companies for December 31, of each year. The investment shown represents the total investment wherever located including

foreign countries and includes all consolidated subsidiaries. It does not include subsidiaries for which the company did not furnish all capital requirements. The assets of such unconsolidated subsidiaries are considered immaterial in relation to the total assets and business of the company and its consolidated subsidiaries.

"In 1946 there were no unconsolidated subsidiaries. In 1947, Wasatch Oil Refining Company, Idaho Refining Company and West Edmond Oil Company were the only unconsolidated subsidiaries. In 1948 and 1949 the only wholly owned unconsolidated subsidiary was West Edmond Oil Company. That company formerly had two subsidiaries but they were liquidated in October, 1949. The only unconsolidated wholly owned subsidiaries in 1950 were West Edmond Oil Company, Continental Consolidated Corporation and its subsidiary, Continental

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Corporation.

"Land, Geological and Geophysical Expenditures are the total of such expenditures in the United States and Canada as shown by the records of the Company. It does not include expenditures in other foreign countries such as South America.

"All other classes of expenditures for exploration and development shown on the exhibit are likewise for the United States and Canada, but excluding South America and they represent the total of such expenditures.

"Dry Hole Expenditures represent the total dry hole expense as shown by company statements including dry hole contributions less a minor amount of such dry hole contributions representing cost of leases contributed. The expenditure for such leases were made at the time the leases were acquired as an addition to leasehold investment.

"Delay Rentals represent the total of such expenditures under oil and gas leases as shown by company statements for the United States and Canada but excluding South America.

"Additions to Leasehold Investment represent the total expenditures for producing and non-producing leases as shown in the Statement of Funds Provided and their Application included in the Financial and

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Operating Statement for each year and from supporting records. It includes the cost of all new or renewal oil and gas leases, options, permits and etc., including Canadian but not including South America.

"Total Exploration Cost (Including Leasehold Additions) is the sum total of the foregoing expenditures.

"Cost of Drilling and Equipping producing wells represents the total of the capital expenditures as shown in the Statement of Funds Provided and their Application and supporting records of the company for lease equipment and intangible development costs from which we have excluded dry holes since they are stated separately in the exhibit.

"Total Expenditures for Exploration and Development represents the Total Exploration Costs plus the Cost of Drilling and Equipping Producing Wells."

PRESIDING EXAMINER: The exhibit will be appropriately marked excluded, offer of proof, exception, and filed by the reporter with the Secretary of the Commission.

* * *

[4484]

ELMER CAPSHAW

was called as a witness, and having been first duly sworn, was examined and testified as follows:

Direct Examination by Mr. Green

Q. State your name, please, sir. A. Elmer Capshaw .

Q. By whom are you employed, Mr. Capshaw? A. I am employed by the Corporation Commission of the State of Oklahoma.

Q. What is your business or profession? A. I am a petroleum and natural gas engineer.

Q. Will you briefly state on the record your educational background as a petroleum and natural gas engineer? A. I was graduated from the University of Oklahoma with a bachelor's degree and a masters degree. I did a considerable amount of work toward a doctor's degree at the

[4485]

University of Oklahoma. I have done a little work in the Colorado School of Mines. I am a registered petroleum

and natural gas engineer under the laws of the State of Oklahoma.

[4486]

Q. How long have you been employed by the Corporation Commission of Oklahoma? A. Almost 17 years.

Q. As petroleum engineer? A. Most of that time, yes, sir, as a petroleum engineer.

Q. During that period of employment what experience have you had in the practice of your profession generally? A. Well, generally I have spent 17 years in the active enforcement of oil and gas conservation laws in the Corporation Commission of the State of Oklahoma and the orders of the Corporation Commission.

Q. Generally, are you familiar with the development of the conservation laws of Oklahoma and the orders of the Corporation Commission with regard to conservation? A. Yes, sir. I have been closely associated with the development of the law, and of the orders and purposes and general procedure of the Corporation Commission in the establishing its oil and gas conservation program.

Q. Are you familiar with the production history of gas in the Hugoton gas field? A. Yes, sir, I am quite familiar with the Oklahoma portion of that field and the Kansas portion, and I am somewhat familiar with the Texas portion.

Q. Are you charged with the duty of assisting in the enforcement of the orders of the Oklahoma Commission in regard

[4487]

to conservation of gas? A. Yes, sir, I am.

Q. Have you done that in the Hugoton gas field? A. Yes, sir, I have spent very much of my time and work in that field and in regard to that field.

* * *

[4518]

Q. From your information of the Guymon-Hugoton field in your opinion what would be the abandonment pressure of the wells in that field? A. I would expect the abandonment pressure to be about fifty pounds.

Q. What consideration do you take into account in arriving at that figure?

MR. McALLISTER: May I have that question. I just can't hear these question at all, Mr. Examiner.

PRESIDING EXAMINER: Read the question, please.
(Question read by the reporter.)

THE WITNESS: This is such an enormous reservoir that unquestionably the abandonment pressure is going to be low, and how low it will be depends on just one thing, and that is what the price of gas is in the field at the time

[4519]

the wells are abandoned.

BY MR. McALLISTER:

Q. You say at the time the wells are abandoned? A. Yes, sir. Gas is going to be produced there so long as companies can produce it and sell it at a profit and price is a direct determinate of whether or not they can sell it at a profit.

Q. At the present rate of production how long down the road is that going to be? A. Before that field is abandoned?

Q. I mean at the condition you speak of where you reach that point of fifty pounds. A. My opinion is it is going to be somewhere between twenty-five and forty years.

BY MR. SPARKS:

Q. Do you mean before the entire field is abandoned?

A. Before the field is abandoned, yes, sir.

Q. Not before any well or group of wells might be abandoned? A. No, sir, not at all. Some wells have been abandoned, in a sense have been abandoned, the particular producing well has been abandoned and new wells have been drilled to replace them.

BY MR. GREEN:

Q. Does Oklahoma have a compulsory unitization law whereby

[4520]

oil and gas fields are compulsorily unitized and produced?

A. Yes, sir, it does.

* * *

[4524]

Q. Are you familiar with the well spacing orders of the Corporation Commission? A. Yes, sir.

Q. Do you understand generally how they arrive at the size and shape of the various sizes and shapes of the drilling

[4525]

and spacing units in these fields, gas fields, included?

A. Yes, sir.

Q. Does the price of gas have anything to do with reference to the size and shape of the drilling units that might be established?

* * *

THE WITNESS: The size and of the spacing unit is very greatly effected by the price.

BY MR. GREEN:

Q. The price of what? A. Of gas in that field, for this reason, if the spacing units are made too small in proportion to the price paid for gas in that field, the operator would be unable to drill all the locations he must drill and realize a profit if the price were not high enough to pay for drilling all those extra wells. In other words, in the Hugoton field our spacing order calls for 640 acres approximately. At the time we made that order there was contention by some of the gas companies that wells ought to be drilled on each quarter section. That would have necessitated the drilling of four times as many wells to drill up this field,

[4526]

if the Commission had followed that argument that was presented by some of the producers. Unquestionably our experience in that field is going to show that 640 acres will effectively drain it, and there would have been a great economic loss in drilling more wells there, particularly four times as many wells. The price of gas effects conservation of the gas in another way.

* * *

[4529]

Q. In the Hugoton area do you have large areas of low productivity around the edges of the pool? A. That is true. At least, that is indicated from all the information we have.

* * *

Q. Let me ask this question, unless wells are drilled in those areas of low productivity will gas be left in the

ground that might otherwise be recovered? A. Yes, sir, some gas will be left in the ground that will not be recovered if wells are not drilled in the low productive area surrounding the pool.

Q. Do you have large areas of low productivity in the

[4530]

field?

* * *

THE WITNESS: The Hugoton pool unquestionably has gas for a number of miles out beyond where any wells have been drilled at the present time. Unquestionably there could be eight or nine, possibly a thousand more wells drilled on 640 acres in that field that would encounter some gas in the formation. It is my belief that there will be immediately drilled up to 1,200 wells in the pool, and possibly 300 more may be drilled provided the companies think they can pay them out in this outside low productive area. If the price were high enough that number might be increased to 2,000 wells instead of 1,500 wells.

BY MR. GREEN:

Q. So whether or not the wells are drilled depends entirely upon the price of gas, the economics of the situation at the time? A. It certainly does.

* * *

[4531]

RAY C. JONES

was called as a witness, and having been first duly sworn, was examined and testified as follows:

Direct Examination by Mr. Green

Q. State your name, please, sir. A. Ray C. Jones.

[4532]

Q. Where do you live, Mr. Jones? A. Oklahoma City.

Q. What official position do you hold? A. Member of the Oklahoma Corporation Commission.

Q. How long have you been a member of the Commission? A. Since January, 1947.

Q. Prior to that time did you hold any official position with the State of Oklahoma? A. A member of the State Senate.

Q. For what period of time? A. From January 1935 to January 1947.

Q. Will you briefly relate the duties of the Corporation Commission of Oklahoma with reference to what duties they perform for the state? A. Well, the duties set out by the constitution of the State are primarily to regulate public utilities such as transportation companies, transmission companies, telephone and telegraph companies, gas and electric companies, as to their rates and practices, motor carriers, and by statute additional duties have been conferred upon the Commission such as the regulation of the oil and gas business in the state. That generally is what we do.

Q. The Corporation Commission of Oklahoma intervened in this proceeding in opposition to the Federal Power Commission assuming jurisdiction in this case, did it not?

[4533]

A. That is right.

Q. How many members of the Commission do you have? A. Three members.

Q. That action was taken after a vote and discussion by the members of the Commission, was it not? A. That is right.

Q. Will you state briefly the reason for the Corporation Commission intervening in opposition to the Federal Power Commission asserting jurisdiction in this case.

* * *

THE WITNESS: Well, the Commission feels like if the Federal Power Commission assumes jurisdiction in this particular case it would probably assume jurisdiction as to the regulation of rates, which would involve the price of gas at the wellhead and any gas that went into interstate commerce which might conflict with our jurisdiction as to our orders that have fixed a minimum price for gas in the Geymon-Hugoton field. That is the chief reason why we have intervened.

* * *

[4535]

Q. The Corporation Commission fixes the size and shape of the space and drilling units, do they not, in Oklahoma in gas and oil fields? A. Yes, they do.

Q. Were you a member of the Commission at the time the seven cent price order was made by the Corporation Commission of Oklahoma? A. No, I wasn't.

Q. That happened in December just prior to your taking office in January, did it not? A. Yes.

MR. McALLISTER: May I hear the question, please.

PRESIDING EXAMINER: Read the question.

(The question was read by the reporter.)

THE WITNESS: That is correct.

MR. McALLISTER: Thank you.

BY MR. GREEN:

Q. Well, in fixing the size and shape of the spacing and drilling units does the Corporation Commission take into consideration the price of gas or the economics of the drilling of the wells? A. Yes, sir.

[4536]

Q. As one of the factors?

MR. McALLISTER: Mr. Examiner, there is two questions in that and I ask the witness be required to answer either one or the other or both and identify which. Take into consideration the economics, take into consideration the price of gas.

PRESIDING EXAMINER: Let's break it down into two questions.

BY MR. GREEN:

Q. Do you take into consideration the economics in fixing the size of spacing regulations? A. Yes, sir.

Q. Is price of gas a necessary factor in determining whether or not the economics of the situation justifies a particular size and shape of the spacing and drilling unit? A. It enters into the size of the spacing unit, yes. It might possibly enter into the shape, more particularly the size.

MR. McALLISTER: Now we have a conclusion, Mr. Examiner. May we have an understanding what all the elements are that enter into economics because he said price is one of the things. What are the others?

PRESIDING EXAMINER: Tell us what the other things are.

BY MR. GREEN:

Q. What are the other elements that you take into consideration in fixing the size and shaping of spacing and drilling units? A. We take into consideration the area to be drained, the

[4537]

size of the unit that can efficiently be drained by one well. We take into consideration the correlative rights of other operators and other owners and other interested parties. We try to fix these spacing units so that they will not only be economically sound they will actually efficiently drain the formation and still protect the adjoining owners of leases and the other interested parties.

* * *

BY MR. McALLISTER:

Q. What specific changes have you made with respect to the size, spacing and what-not with respect to the Guymon-Hugoton field since 1948? A. What specific changes have we made?

Q. In the rules with respect to the size, shape and spacing as to a drilling unit. A. So far as I know we have made no changes.

Q. You have made no changes whatsoever? A. Since 1948.

* * *

[4539]

BY MR. TULANE:

Q. If at such time as your minimum rate is set at one

[4540]

level and the federal rate is set at any point above that, at that time could there be any interference with the jurisdiction of your Commission. A. I can think of none right at this time.

Q. And the only possible conflict could arise if you desired to raise your minimum above the rate that had been fixed by the Federal Power Commission? A. I don't know whether that would be the only possible conflict. I don't know. I couldn't answer that question right now.

Q. Do you now personally know of any other possible conflict? A. Not without giving it some thought I can't think of any.

* * *

[4676]

ELMER CAPSHAW

resumed the stand, and having been previously duly sworn, was examined and testified further as follows:

Cross-Examination by Mr. McAllister

[4712]

Q. I believe you stated yesterday if a sufficiently high price could be established for gas at the well head in that area, the marginal area, all of that marginal gas could be recovered. A. No, I didn't make that statement, but that more of that marginal gas would be recovered.

[4713]

Q. More of that, with a higher price per Mcf at the well head? A. Yes, sir, with a higher price, in all probability more of that marginal gas would be recovered.

Q. And as you moved the price on up, the further you can go out into the thinner sands and with less productivity per acre? A. That is correct.

Q. And it is just a matter of judgment how high the price would have to be to recover a given quantity of that marginal gas? A. Yes, sir.

Q. And that price would have to be a price related to the cost of recovery. When I say recovery I mean the cost of drilling the well or carrying or conveying that gas to a point of useful consumption. A. It would unquestionably be related to the cost. Companies will drill a well only if they can expect to get a return on their investment, and I don't think they will drill them purposely and expect to lose money on them.

Q. No, that has not been your experience in the oil and gas business? A. No, sir, it hasn't.

Q. As an engineer having responsibility with the Oklahoma Commission, it isn't your contention, is it, that

[4714]

the gas price for the whole field should be raised so high that it will enable the marginal lands to be produced at this time, or is it? A. The question of how high the price should be raised, of course, would involve whether or not it was high enough to develop marginal acreage wherein the production of the gas would be worth while.

Q. Let's put it this way, if it took twenty cents an Mcf to assure drilling in the marginal acreage at the well head, should that be the measure of the price that would be fixed for the entire Guymon-Hugoton field? A. No, sir, I don't think it should. If it took twenty cents at the well head, in order to get all marginal acreage drilled, the question should be, would the additional gas recovered be worth the raise in price?

Q. It is an economic study that can't be answered. A. That is right. It certainly can't be answered specifically, because you never know the exact tax and in the first place you don't know exactly how much more gas you are going to get, but you've got to make some kind of an estimate if you are going to set a price for that specific purpose.

* * *

[4716]

Q. What you have said about the possibility of drilling wells in the marginal acreage it is based entirely upon

[4717]

the assumption that a sufficient price would be fixed to justify that drilling? Is that right? A. Not necessarily a sufficient price be fixed, merely that—

Q. (Interrupting.) That they get a sufficient price?

A. Yes, sir, merely that they get a sufficient price.

Q. And you are not now saying what that price would have to be? A. No, sir, I couldn't say what that price would have to be. It would all depend on circumstances. It may depend upon the time.

Q. You mean time— A. (Interrupting.) General prices may be entirely different now than they were ten years ago.

Q. Or ten years in the future? A. That is right.

Q. All you are saying is that there is a relationship between, there must be a relationship between, the gas that is recovered and the cost of drilling the well. A. That is true.

Q. And as you go on out further the price has to be higher as the marginal lands and gas becomes more skimpy per acre, why, it takes a higher price to justify drilling. A. I wish you'd read that question. The wording didn't sound as if I could answer it.

[4718]

PRESIDING EXAMINER: Read the question.

(The question was read by the reporter.)

THE WITNESS: I can't answer that question without an explanation. He says as you go out further the price has to be higher. There seems to be an implication that a higher price is going to be paid for the outside drilling, the gas that comes from the outside drill, than is paid in the center of the field, and I am not anticipating such a situation at all. There must be a higher price prevailing in that field or they will not go further out or at least there will be limitations on how far they go out.

* * *

[4720]

Q. Am I to understand that it is your belief or opinion that the price fixed for a field should be sufficiently high that it will enable the least productive wells that may be drilled to pay out? I mean reasonably, not the one that hasn't anything in it, but I mean the price ought to be suffi-

ciently high to enable a person to produce and pay out on a commercial gas well? A. Yes, sir.

Q. And regardless of what that price is, whether it is eight or ten or twelve or twenty cents, that ought to be the price? A. The price ought to be sufficient to enable the drilling of a well into a source of supply in producing that gas in any case.

Q. And it is on that basis that you say these wells should be drilled in the marginal acreage to recover the gas, the wells ought to be drilled and the price ought to be high enough to justify the drilling of the wells? A. The price ought to be high enough to justify drilling some marginal wells, of course.

Q. All the marginal acreage? A. Your marginal acreage may be so poor that you couldn't justify a price high enough to force the drilling of that marginal acreage. That is easily possible.

* * *

[4723]

Q. And it is your opinion, is it, that the price of the gas should tend to be so high that it will permit the development of the marginal acreage by drilling of wells and that that cost of the marginal drilling for the recovery of gas should be the determining factor in fixing the price for the field as a whole? A. It certainly should not be the determining factor. It would only be one of the many factors. That should be taken into consideration, the additional gas that would be recovered by drilling marginal acreage, it should be one factor taken into consideration.

Q. Not the only factor or the most important factor?

A. No, sir, not the most important.

Q. And the consideration might be such that it would not influence the total over-all price at all if the gas to be recovered in relation to the total gas in the field would not justify a higher price?

MR. McALLISTER: Will you read that question. If you have any question about the question before you answer it, I'll be glad to clarify it for you.

[4724]

THE WITNESS: Yes, sir.

(The question was read by the reporter.)

BY MR. McALLISTER:

Q. I meant by that the gas to be recovered in the marginal acreage in relation to the total in the field would not justify a higher price? A. I think the additional gas recovered might, under certain circumstances, not be justified by raising the price.

Q. Or that the amount to be recovered wouldn't justify raising the price? A. That is right. I'm sure if you went far enough out to the outer edges you wouldn't be justified in trying to recover that gas by raising the price.

* * *

[4763]

RAY C. JONES

resumed the stand, and having been previously duly sworn, was examined and testified further as follows:

Cross-Examination by Mr. McAllister

* * *

[4765]

Q. In your testimony yesterday you said that price was an element in determining the size of the drilling unit? A. I said what, now?

Q. Price was an element to be considered in determining the size of the drilling unit. Do you recall that? A. Yes, sir, I think it is, yes, sir.

Q. What is that? A. I don't know whether that was considered at the time it was spaced, because I wasn't on the Commission, but I think price definitely enters into the economics of drilling a well, and in the size of the unit.

Q. Correct. Whether it is on 40 acres 160 acres or 640 or larger? A. Yes, sir.

Q. With the size established of 640 acres, and that to remain constant for the future, I mean so far as the present indication is concerned, the drilling of a well on that unit to-day is governed by the rule established by the Commission and not by the price? A. Yes, sir, I think the price probably entered into it.

Q. Do you know? A. I don't know. I couldn't say because I wasn't a member of the Commission at the time, but it was our custom to consider price.

[4766]

Q. Well, price in relation to what? A. Price in relation to the fixing of spacing units in connection with the economics of the venture.

Q. I mean the economics of the venture would involve the cost of drilling the well, or a well? A. A well.

Q. Well, there is a wide variation in that? A. Yes, sir.

Q. There is a wide variation in the volume of gas you can expect to produce from a well? A. There is a variation in the amount of gas in place, the amount you can expect to recover.

Q. How do you equate all of those, or do you? A. We usually consider the amount of recoverable oil or gas and various and sundry things enter into that.

* * *

[4770]

Q. I mean from the standpoint of conservation you have to provide that unit which will effectively recover the gas and oil underlying the structure? A. And maintain that same pattern and uniformity of size and shape throughout the entire pool.

[4771]

Q. So that there the element of consideration is the recovery of the gas or the oil? A. That is right.

Q. And price doesn't enter into it there? A. Well, it does enter into it, too, in the matter of original setup—

Q. (Interrupting) I mean you can't do anything without money, that is true— A. (Interrupting) In fixing the original pattern, we do take into consideration the economics of it.

Q. But it has been established already? A. After it is established, we don't take into consideration the price, no.

* * *

[4776]

MASON WALTERS

resumed the stand, and having been previously duly sworn, was examined and testified further as follows:

Direct Examination (Resumed) by Mr. Perdue

* * *

[4780]

Q. Each and every one of these maps or diagrams, that is to say, Exhibit 1-A, 12-A, 13-A, 14-B and 15-A which we have been discussing are corrections or modifications of maps and diagrams which have already been received in evidence in this proceeding, is that not correct? A. That is correct.

Q. And the modifications and corrections that you have made upon these maps were gained by you from maps supplied at your request by the Phillips Petroleum Company? A. That is true for—

Q. (Interrupting) Excepting Exhibit 1-A?

[4781]

A. That is right.

Q. And the information for Exhibit 1-A was gained by you from the files of the Federal Power Commission?

A. That is correct.

MR. PERDUE: That is all the questions I have.

Mr. Examiner, I now offer Exhibits 1-A, 12-A, 13-A, 14-B and 15-A into evidence in this proceeding.

* * *

[4782]

MR. SPARKS: I have no objection, Mr. Examiner.

PRESIDING EXAMINER: Does anyone else have any objection to these exhibits?

(No response.)

PRESIDING EXAMINER: Exhibits 1-A, 12-A, 13-A, 14-B and 15-A are received in evidence.

[4783]

* * *

GEORGE P. BUNN

resumed the stand, and having been previously duly sworn, was examined and testified further as follows:

Cross-Examination (Resumed) by Mr. McAllister

* * *

[4805]

Q. What would a distribution line be, then? A. That would have reference to someone who takes gas from some source and distributes it, you might even say that some of these lines in the broad sense distribute gas to the various points of disposal, but the operation in the sense of our business is gathering to those points of disposal.

Q. According to your statement that gas to the camp there could be called either a gathering or a distribution line? A. You can call them a lot of things if you want to.

Q. I mean according to your concept they would right-

fully be so termed? A. Not as we ordinarily use them and think of them in the business.

Q. This would be a gathering line distinctly and not a distribution line according to your concept? A. That is right. If we had a system of lines in a town someplace we might call those distribution lines.

[4806]

Q. And out in those camps, I suppose you have facilities there, water heaters and stoves and it is gathering lines right up to the burner tip in those camps? A. It is the gathering up to the point where the occupant uses it, yes.

Q. Well, if Phillips is the occupant in that—no, particular one is assigned there, let's say, a general utility building that is operated by Phillips, it is gathering right up to the burner tip where the flame is lit? A. Yes, I'd say so, just like it would be disposal in the same sense where it is burned under the boilers in the plant.

Q. Yes, or the flare gas? A. That is correct.

Q. That is still a gathering line forty feet up in the air where the gas is vented or flared? A. That is right.

Q. Out of this Goldsmith plant? A. That is right, that is the point of disposal of that gas, and that is a required function in a number of our plants to get the gas away from the leases even if it has to be vented.

Q. By and large the determination of what constitutes gathering in any plant is based upon the contract that you

[4807]

have for disposal of the gas? A. No, I wouldn't say so.

Q. Well, if you had to treat the gas and you do treat it, then the treater is a part of your gathering? A. That is one disposal, yes, that would be one.

Q. (Interrupting): I mean that is fixed by contract and that is the only reason you do it? A. For one disposal, but there is more than one disposal in any plant.

Q. Now, you stay down to the question I have and I think we'll make more progress. In the Crane plant, you have no obligations to remove any sulphur at all? A. That is correct.

Q. And in other plants you do remove the sulphur to a certain extent. A. In some plants we do, yes.

Q. And that sulphur removal is a part of gathering because you are required to do it by your contract of sale. A. Whenever it is a requirement for a particular contract, yes, that is the conditioning of the gas for its disposal as part of the gathering.

Q. And that is primarily, then, fixed by contract? A. Well, for one particular sale where a contract requires that, that would be true to you, but for any

[4808]

other disposal in the plant it might not be true.

Q. Well, that is true where you bring the gas back to your own camps. A. Or you vent it or burn it under boilers or return it to a lease, you may not be required to remove the sulphur, or dehydrate it.

Q. But your obligation to return to the lease is a contract obligation? A. That is correct.

Q. And because you have that obligation that makes

the lines leading back to the lease gathering lines? A. That is right, partly, part of the gas goes to our own properties and is not a contract obligation.

Q. No, but to the extent that you have a contract which obligates you to return gas to the leases, it is a gathering line because of that obligation which you must fulfill? A. Well, it is a gathering line because of the function it fulfills, whether it is in the contract or not.

Q. Well, if you sold it to somebody for lease use, would that still make it a gathering line? A. Yes.

* * *

[4872]

Q. That [Exhibit 45-B] is a plant diagram of the Sneed plant, is it not, Mr. Bunn? A. Yes, sir.

* * *

[4874]

Q. The gas that goes to the 2-inch line there, fuel gas to the office, that is a Phillips building? A. Yes.

Q. And that is one of those places where the gathering line runs, according to your concept, clear down to the burner tips? A. Yes, the gas runs to the burners.

Q. I know, but I mean the gathering lines according to your testimony is that all of those lines right up to the burner tips are the gathering lines? A. Yes, that is one of the points of disposal of the gas going to the plant.

Q. And those lines to the camp and the lines carrying fuel back to the compressor building and to the boiler house, all those lines are gathering lines? A. Yes, those are all gathering lines, because they carry part of the gas

entering the plant to the points of disposal just as a part of the gas is disposed of in the plant by the extraction of gasoline.

Q. Well, we have not gotten that far yet. A. Well, I have. That is one of the points of disposal.

[4875]

Q. We'll follow that gas over to Panhandle and back again, but I'm talking about the 6-inch line to plant which is metered into the compressor building and also into the boiler house. A. That is what I'm talking about, because the gas in the reabsorber which, as you have pointed out has not been in an absorber before, in the 6-inch line, is an extraction of gasoline, accomplishes an extraction of gasoline from the gas in that line that moves to the re-absorber.

Q. Well, what I am referring to is 6-inch fuel gas to plant, do you see that? A. Yes.

Q. And it leads over with a take-off at right angles down to the boilerhouse? A. Yes, sir.

Q. And those gathering lines are the lines and— A. (Interrupting.) That is the correct term.

Q. The lines leading to the burner tips in the boiler house? A. Yes, up to the burners, that is right.

Q. Well, it includes the burners, doesn't it? A. I think that it is reasonable to say that gas is disposed of when it enters the burner. It is no longer recoverable, it is disposed of at that point, whether it

[4876]

burns or whether the fire is out, if the gas is flowing.

* * *

[4909]

Q. No, I'm finishing it. The gas, once the plants are in operation, represents the continuous moving and processing and handling of the gas, is that right, just as though these entire facilities all belong to Phillips? In other words, the operation is coordinated to maintain a continuous operation? A. Yes, presuming that the plants will handle gas every day, twenty-four hours a day, but they don't always do that. There may be accidental interruptions or something of the kind and there is no requirement that Panhandle Eastern should continue to deliver gas to Phillips if it ceased bringing gas to its compressor station there.

* * *

[4911]

Q. So when you begin talking about the plant running continuously except when you have these unforeseen accidents, you mean by that that this plant regularly operates and is expected to operate twenty-four hours a day three hundred and sixty-five days in the year and it

[4912]

does so operate with only very, very minor interruptions?

A. Yes, I think that is a very fair statement of it.

[4913]

* * *

Q. (Interrupting) All I'm trying to say is that that gas

[4914]

comes to you just as continuously and without interruption as if you were operating the compressors? A. Well, it comes to us continuously whoever is operating them.

Q. Whoever is operating them. Well, that is all I'm trying to get at, is that this is a coordinated operation that works as smoothly or effectively as if it was all under one roof and operated by one person? A. That is just the same as any of our gasoline plants. The producer supplies gas, and as long as he does it flows continuously to the plant. It is the same thing here, as long as Panhandle Eastern operates and the gas flows to us, why, it is all continuous and you'd say it would be coordinated.

Q. I'm not trying to get you to say you are doing a better job or poorer job than anybody else or that Panhandle is doing a better or poorer job than anybody else, but I'm trying to get you to say with respect to this operation, the coordinated operations of both are such that it is continuous and is not interrupted in the fashion which I stated a moment ago. A. I said the operation, I can say, is continuous except for very minor interruptions.

* * *

[4936]

Q. Will you turn to Exhibit 45-C, Mr. Bunn, which is a diagram of the plant lay-out known as the Gray plant?

A. Yes, I have that.

Q. That map isn't quite as fancy as some of the others we have. Let me ask you this, if you are familiar with that plant lay-out there, are all of those lines which you

see there as being solid lines the gathering lines as you have defined them and as you understand them? A. As far as I can distinguish from the Exhibit 45-C the pipe lines depicted thereon as solid black lines are gathering

[4937]

lines.

* * *

[4943]

Q. You have the Independent Natural Gas Company purchase meter. Do you note the location of that purchase meter? A. Yes.

Q. Is that the point at which you deliver gas to the Independent Natural Gas Company? A. No. I believe the gas is delivered to them off the absorbers at the regulatory back pressure regulator.

Q. What kind of a line is that in there, then? Is that a gathering line between that point and the meter? A. That is Independent Natural Gas Company's line. The metering is done at the point indicated as Ind. Company gas purchase meter.

[4944]

Q. Is that line not the line of Phillips from the regulator out to the purchase meter? A. No, sir.

Q. Well, they own that line on Phillips property, then, back to the back pressure regulator? A. I think that is right. I haven't checked the lines here for a long time, but I think that is right, and that is the way the sketch indicates it.

Q. According to your concept, then, in this case the delivering lines, the gathering lines, terminate there at that back pressure regulator? A. Our gathering lines would terminate at the point where we deliver the gas to Independent.

* * *

[5022]

Q. Now, I want to find the flare you had on Exhibit 101. It is right of the middle and above the middle of the exhibit or the picture, isn't that right, right near the arrow heading north? A. Just south of that arrow, that is one of our flares, yes.

Q. Do you have more than one flare on this picture, Exhibit 101? A. Yes.

Q. That is one of them? A. Yes.

Q. That is the one that looks like a may pole? A. Yes.

Q. And that is a gathering line?

[5023]

A. It is, yes, up to the point of disposal of the gas into the fire.

Q. Where is the other flare you have on there? A. It is right near the middle of the photograph at the bottom part of the picture, right at the edge of the darkest area.

Q. It seems to be a much higher flare line. A. That is because it is closer to you.

Q. I see. And that is a gathering line, too? A. That is right. It performs the function of disposing of gas at times.

* * *

[5078]

MR. JOFFEE: Mr. Examiner, Mr. McAllister has yielded to Kansas City to ask a few questions of Mr. Bunn at this time.

PRESIDING EXAMINER: Very well.

Examination by Mr. Joffee

* * *

Q. What is done with the gas before it is delivered to Cities Service Gas Company at the East Edmond field? A. The gasoline is extracted from it as it comes from the

[5079]

wells and leases, and it is dehydrated in at least one plant, I think in both plants where we are delivering gas to Cities Service, but I know it is in one.

Q. There are two gasoline plants operated in connection with the East Edmond field, is that correct? A. With the East Edmond field?

Q. Or do you call it the Edmond field? A. Well, there are two adjacent areas, one called Edmond and the other West Edmond.

Q. In addition to the operation of the gasoline plants and the extraction of gasoline is there not one or more compressor stations operated at that field? A. There are on the gas which is gathered in the field in connection with those plants, yes.

* * *

Q. Well, will you explain how the compressor stations are operated? A. Well, there are some of them outlying

in the field area and some of them in the plants, but they are all operated to compress the gas prior to the extraction of gasoline.

Q. The residue gas is delivered to Cities Service Gas

[5080]

Company at about 500 pounds per square inch, isn't that correct? A. A little higher than that—

Q. (Interrupting) 550? A. It is processed a little higher than that. About 500, I think, is right, yes, at the delivery.

* * *

Q. In other words, the compressing of gas to such pressures as 500 and 550 pounds per square inch, in your opinion, is considered part of the process of gathering the gas, is that true? A. Yes, it is a part of the process of gathering in that it is conditioning gas for disposal.

Q. By disposal you mean the sale in this instance to an interstate pipe line? A. To any purpose where compression is necessary. The purpose in gathering is to collect the gas, condition it and move it to points of disposal. That is the operation.

* * *

[5082]

Q. Well, does Phillips operate that particular plant or it is some other company? A. Phillips mechanically operates it, but the ownership is diverse.

Q. But Phillips is the seller of the gas to Cities Service Gas Company, is that not true? A. On its portion of ownership of the gas.

Q. Isn't the contract with the Cities Service Gas Company made by Phillips as the seller, the contract that is in evidence in this case? A. The original contract for the sale of gas from the plants in that field were made by the partners in the plants, but the sale of gas currently is by the owners of the gas.

[5083]

Q. You didn't answer my question, Mr. Bunn. A. That is the best I can answer.

Q. Do you mean to say the contract here in evidence relative to the sale of gas to Cities Service Gas Company is not made by Phillips as the seller? A. I don't know what is in evidence in total here as exhibits, but I know that the gas is sold to Cities Service by the owners of it in the West Edmond field.

* * *

[5085]

BY MR. McALLISTER:

* * *

[5097]

Q. What are the lines that connect the casing through the separator and what-not, what are they? A. I would call them producing facilities.

Q. What are included in those producing facilities that you are talking about? A. Oh, producing facilities would consist of the well itself and all equipment in connection with it in the well, in the hole, the bore, the equipment on

top of that well, which might control it, which might include a derrick over it, it would include the lead line from the well to a separator if a separator were installed, it would include the separator itself, and the control equipment on it, and tankage even in connection with it, that would all be and is considered in the industry generally as producing equipment. It might include a treating plant.

Q. Do you have any writing on that or is that just your word of mouth concept, an expression of your concept of what it is?

MR. SPARKS: May we have the question read?

PRESIDING EXAMINER: Read the question.

(Question read by the reporter.)

BY MR. McALLISTER:

Q. I mean you stuck it in there as a gratuitous statement, and I want a definition of it now. A. I didn't stick it in as a gratuitous statement.

[5098]

Q. You said "It is my concept and understood in the industry", and I'm asking you if you have any writing on that which shows that it is the concept in the industry? A. Nobody ever wrote me a letter to—

Q. (Interrupting). Nor, I mean anything in writing or printed that shows that description of facilities. A. I'm sure I have something in that connection if I reviewed it and went through all I have. It might show that in printing or something of the kind, but I know that is what our production department considers the facilities.

Q. When you limit it to yourself and your company

I haven't any objection, but when you include it in the industry and if you insist on that, then I'd like to have you produce something in writing as some authenticity representing the industry, not currently but in the past when this issue was not present? A. You know what an industry may consider and classify lots of times without having it in writing.

* * *

[5115]

Q. Well, then, we can get it down to this process, whatever you are required to do to process the gas under these gas purchase contracts or whatever you elect to do in a gasoline plant along with that processing, and as a part of the total processing, that is all a part of gathering and within your concept? A. In general I think that is correct, if it is done for disposal and prior to it, it is part of gathering.

Q. And then on beyond that the gas passes out of the gasoline plant and is transported for some distance—nothing to be done in that thousand feet or whatever it is outside the plant, but that is still part of the gathering up to the point of actually delivering it to the purchasing company and where we are concerned here it is El Paso, Panhandle, Michigan-Wisconsin, Independent Natural Gas Company or Cities Service? A. Yes, if it is in or near the area of production.

Q. In or near, now we have a new term. How far is it in or near? A. I don't know. That in is clear, within the confines of the area of production. The limits of it, near is a term that is difficult depending on circumstances.

Q. You say area of production?

[5116]

A. Yes.

Q. That might be 25 miles away? A. No, I wouldn't say so. It is within the limits of the production from which the gas comes.

* * *

[5119]

Q. Well, I don't know, but they have some facilities there for compression and so on, and those are gathering lines of Panhandle also carrying it into the, gathering it into, their compressor station and other facilities adjacent there, are they? A. Do you mean at Hansford plant?

Q. Yes. A. Of course, Panhandle Eastern doesn't have any equipment that I recall right at the Hansford plant except the pipe line—

Q. (Interrupting) Well, let's call it a pipe line, it goes into a pipe line, is that a gathering line for Panhandle to take the gas into their next plant? A. No, it isn't a gathering line in the sense of my

[5120]

concept of gathering, as understood in this industry.

Q. It isn't? A. No, it doesn't gather gas from wells and leases.

Q. If Phillips lines were to go out there another half mile to a point of connection, this is an assumption now—
A. (Interrupting) From Hansford plant?

Q. From Hansford plant, in addition to the area there they transport, you had another half mile out there that

would still be gathering no matter what the distance? A. I won't say no matter what the distance, no, but if it is a half mile, I'd say, yes, it is still gathering. You don't gather out in the middle of the lake, as you said one day, you have to gather for a purpose and that is a disposal, and gathering goes to that point or those several points of disposal.

Q. Including the vent stack up in the air forty feet?

A. Yes.

Q. The sales meter there that is on that line, is that a gathering facility? A. It is if it is Phillips Petroleum Company's.

Q. It is a gathering facility if it is owned by Phillips?

A. Yes, because it is a part of the facilities that are required before disposal.

Q. If the facilities are owned by the purchasing company than what are they, the gathering facilities? A. No, they would not necessarily be gathering facilities.

[5121]

They might be incidental gathering facilities depending on where the point of delivery was in that installation.

Q. If the point of delivery is beyond the meters and the meter runs? A. Then they would be incidental gathering facilities.

Q. Whose are they? A. Well, they are not Phillips Petroleum Company's. They are incidental facilities.

Q. They are incidental facilities. Then the point of sale is beyond the Phillips ownership of facilities if the meters are owned by somebody else? A. They might be. I say they might be, at the outlet of meters, for instance,

owned by somebody else.

Q. Under those circumstances is the sale a part of the gathering? A. The sale is an incident to gathering, just like the purchase of the gas.

Q. I said it is a part of gathering? A. It is an incident to it.

Q. It is not a part of it, though? A. It is not a mechanical thing, the sale itself, it is not a facility, no.

Q. You make a sale to El Paso. Is that sale a part of the gathering according to what you are saying? A. It is an incident to gathering. It occurs at the end

[5122]

of gathering.

Q. Gathering has been completed before the sale? A. It is an incident to that gathering.

Q. Just answer that question? A. No, sir, it is an incident to gathering. The one can't start beyond the point if the two begin at the point.

Q. They are simultaneous, then? A. They are simultaneous.

Q. The end of the gathering, the sale and the beginning of transportation, all three are simultaneous at one time? A. No, not necessarily.

Q. What is the gap between the end of gathering and the beginning of transportation? A. The end of gathering—

Q. (Interrupting) The end of gathering and the beginning of transportation, what gap is there between those two? A. The end of gathering is at the point of disposal.

* * *

[5127]

Q. So there the question of gathering is determined by the contract? A. In a considerable measure, yes.

Q. Well, entirely so far as the return and extraction is concerned? A. So far as that part of it is concerned, yes, sir.

* * *

[5133]

Q. We went through that yesterday. If the delivery point is down there where the meter is it would be gathering that far? A. Well, I don't know whether it would or not. The actual point in the reality of disposal by the gatherer insofar as he has custody over it would be at the point where his facility ends and the other fellow's begins.

[5134]

Q. Well, let me get at this thing, change of ownership has everything to do with it, then, is that right? A. As far as the functions of the gatherer himself is concerned.

Q. It does? A. Yes, what he is performing, what he is doing is a reality.

Q. If you ask a gatherer, as you have used the term here, brought the gas up to the inlet, up to the fence line, of the Sherman plant and there turned it over to Michigan-Wisconsin and delivered it to them at that point, then, your gathering would be completed at the fence line, and I mean just exactly as your facilities are laid out there today as the various lines, you own them up to the various points at the fence line—

A. (Interrupting.) Our gathering would end at the point we dispose of the gas to Michigan-Wisconsin, yes.

Q. Right at the fence line? A. Well, wherever we actually dispose of it.

Q. What I was making clear was that the lines as they are now laid out, where they cross the fence line coming into the plant, and you disposed of it on those various lines as it came into the plant, that would be the end of your gathering? A. I'm not sure I understand. You say coming into the

[5135]

plant?

Q. I mean the lines from the field come up to the fence line as they come in the plant? A. Converge in the plant?

Q. Yes. A. Would you restate your question, now?

Q. And under those circumstances you were selling and delivering the gas to Michigan-Wisconsin at the fence line, no matter what line it was coming in on. A. If we were selling it at that point?

Q. Yes, yes. A. If we were actually delivering it to them—

Q. (Interrupting|) I mean actually delivering it to them, then. A. If we were actually delivering it and disposing of it to them.

Q. At those points. A. At each of those points.

MR. SPARKS: And the facilities beyond that point were there?

MR. McALLISTER: Yes, all the facilities beyond those points belonging to Michigan-Wisconsin.

A. Each of those points, up to those points would be gathering.

MR. McALLISTER: And beyond that would be something

[5136]

else— A. (Interrupting.) It would be theirs, not our gathering—

Q. And when you say our, you mean Phillips Petroleum? A. That is right.

* * *

[5211]

Q. I show you the official copies of Exhibits 51, 50, 49 and 48, and will you examine those exhibits, Mr. Bunn, and then I have a question that I would like to put to you when you have had an opportunity to look at the exhibits. A. Yes, I have reviewed them.

Q. The question is this, do you base your answer that the lines shown on those exhibits are gathering lines within the meaning of the term "gathering lines" as used in the industry, the question is, do you have any treatise or documentary support for that statement as to the practice in the industry wherein the question of the proper designation of those lines is under discussion and not merely the incidental use of a descriptive term as referring to the lines? A. I'm sure that given time enough I could find—

Q. (Interrupting.) You say you could find them. I asked you if in making that answer you based it upon such written evidence of classification within the industry. A. I had in mind that in communication among units

[5212]

of the industry words are used, terms are used, such that there would be no doubt but what it is this type of line as expressed in these exhibits that would be called gathering lines by others in the industry. I also had in mind many contacts with people in the industry from day to day over the properties, looking at our lines with them and looking at their lines and referring to them regularly as such, as gathering lines, as depicted on these exhibits. It is a matter of acquiring a broad knowledge over a period of years, not from written things necessarily but let us say confirmed in part in written matter.

Q. But your answer here, as I understand what you now say, is it is based solely upon your own personal impression, gleaned, as you say, from contact with people who are members of the industry and not upon any written treatise or considered document wherein the discussion had for determination the proper naming of lines of this character? A. It has been both. It has been—

Q. (Interrupting.) Would you refer me to one of these documents that you say exists? A. I say you give me time enough and I can—

Q. (Interrupting.) I mean how much time do you want? A. I don't know. I had never thought of seeking all those things, but I know I have them in the past over a long period of time. I undoubtedly have books on it from

[5213]

which I could cite you examples in addition to correspondence with others from other concerns in this industry.

Q. Can you do that by tomorrow morning? A. What is that?

Q. Can you do that by tomorrow morning? A. No, I couldn't.

Q. It is not that readily available? A. Just because there has been no reason for accumulating any such information on that. I'd have to make research on it just as you or anyone else would. It could be done, I'm sure, in time.

Q. How much time? A. I don't know. I have done jobs of that kind on other occasions for other purposes and I know you can not estimate very well the time to present comprehensive and voluminous citations.

Q. But you haven't done that in the statements you have made here? A. No, I haven't. I didn't think it was necessary. I just know it.

Q. As a matter of fact, if others in the Phillips organization, as they have in this docket, have testified, then in your opinion they don't know what they are talking about? A. If what, did you say?

[5214]

Q. If others who are employees in the Phillips organization in testifying in this docket have otherwise classified these lines and referred to them, then they don't know what they are talking about, is that your— A. (Interrupting.) Well, I would say that anyone that might have said that, they might not have been well versed in it. I don't know. I don't remember who all might have said it. They might have been mistaken.

Q. And they might have been talking offhand, too, and using the usual terms that they do in their day-to-day business, is that right? A. They might have used other words, they have used other terms, than gathering lines. As I said myself, there are other terms that are used for all of these lines, even these interstate pipe lines, there is not the same word or same term always used by everybody to refer to them.

Q. That is right. A. But in the case of these gathering lines, so far as I can recall in the history of the business, people in this business in all kinds of companies, in communicating with each other and dealing with each other very regularly use the terms gathering lines in referring to them as they are depicted on these exhibits.

* * *

[5268]

Redirect Examination by Mr. Sparks

Q. Mr. Bunn, will you turn to Exhibit No. 111? A. Yes, I now have Exhibit 111.

Q. In the lower right-hand corner of that exhibit, Mr. Bunn, there is a gray arrow labeled "Texroy Booster". Do you find that? A. Yes.

Q. What is the function performed by that Texroy Booster? A. That booster collects the gas from the wells at that point, draws the gas from the wells, elevates the pressure and pushes it on its way into Pantex Natural

[5269]

Gasoline plant.

BY MR. McALLISTER:

Q. It pushes into what plant? A. Pantex gasoline plant.

Q. Where is that? I see it, never mind.

BY MR. SPARKS:

Q. And at the lower part of the map, just below the Hutchinson-Carson County line, do you find a gray arrow labeled "Carson Booster"? A. Yes, sir.

Q. What is the function performed by the Carson Booster? A. That is similar to the function performed by Texroy Booster.

Q. Are those two boosters gathering facilities? A. Yes, sir.

Q. They are not pipe lines, though, are they? A. No, not altogether. There are some pipes around the plants, some lines, but they are more than that, they are gathering facilities.

Q. You have previously testified, I believe, that the red lines on this Exhibit 111, which is an exhibit of the Borger-Moore County area, are raw gas gathering lines, have you not? A. Yes.

[5270]

Q. Are there in that gathering system other mechanical devices that are not pipe lines as such? A. In those gathering facilities?

Q. Yes. A. Yes.

Q. Can you name some of them?

MR. McALLISTER: We are talking about the Borger plant, are we?

MR. SPARKS: No, I'm talking about the raw gas gathering lines shown in red on Exhibit 111.

MR. McALLISTER: Might I get one point clear? There is red on here of different shades. Which ones are you talking about? Are those lines supposed to be different or is it just one fellow has been using poor ink of some kind?

BY MR. SPARKS:

Q. Go ahead and answer. A. Let us say that we are referring to what I might call the bright red or the carmine lines. There are some other colored lines there which are not what I would call bright red, they are more of a tan, they may be a shade of red, but the bright red lines are the lines to which I'm referring.

Q. Mr. Bunn, the line down at the bottom of the map which is labeled "From Plains Water Station", that is a water line, is it not?

[5271]

A. Yes, and that is one of the lines I'd refer to as tan.

BY MR. McALLISTER:

Q. That is a gas line, though? A. That is a water line, and I'm not referring to that as a red line. That is what I mean.

Q. I mean there is nothing on here that says it is a water line. It is the first time it has been described as such? A. It is a water line and the legend indicates that the color shown on there is a water line.

BY MR. SPARKS:

Q. It doesn't appear to be red to you, does it? A. No, I would call it tan.

MR. McALLISTER: It appears to be red to me. I was wondering why colors so similar were selected unless it was to confuse.

BY MR. SPARKS:

Q. Did you select the colors so they would be confusing there, Mr. Bunn? A. No, as a matter of fact I didn't select the colors, and in daylight these contracts are much better than they are under this light.

MR. McALLISTER: We just hope that the Commission can look at them in daylight, then.

[5272]

BY MR. SPARKS:

Q. Mr. Bunn, would you answer the question I asked you before I was interrupted? A. I believe you were asking me some of the facilities there might be in the gathering facilities that are not pipes or pipe lines. Well, let's see, there are metering, for instance, which are part of the gathering facilities. There are many meters. There are meter instruments and such appurtenances in the meter houses. There are drips all along these lines at different points to remove condensed liquids from place to place. In connection with the operation of the lines there are houses of the employees that are necessary to the gathering and we regard as part of those facilities. They might be considered incidental to gathering, of course, because they take no direct part in it. There are offices at several points around the area for the people who care for the gathering facilities. There are compressors such as I have indicated in Carson and Texroy Boosters, and, of course, other ap-

purtenant facilities in those plants such as cooling towers and buildings to house the engines and compressors, water tanks, instruments for measuring pressure and temperature and such things of that. There are a number of items that would not be called pipe lines.

Q. There are water lines to those compressors, are there not? A. Yes, there are water lines to serve those engines and

[5273]

compressors. They are part of those facilities.

Q. Are all of those facilities gathering facilities even though they aren't pipe lines? A. Yes, we regard them all as gathering facilities because they take part in the operation of gathering.

MR. McALLISTER: Might I ask a question there; He left out valves and I was wondering if there was any reason.

BY MR. SPARKS:

Q. I'll ask him. Was there any reason for leaving out valves? A. No, I didn't consciously omit valves. There are many kinds of fittings involved there, there are relators and valves all over the system at different points. Valves, at least, are sort of part and parcel of pipe lines and I didn't think to mention them, but there are valves all over and, of course, valves in these booster plants, regulators of one kind and another.

Q. Gathering facilities are not limited to pipe lines or pipe, are they, Mr. Bunn? A. They certainly are not.

Q. If all you had was pipe and nothing else, why, you

just probably couldn't operate, at least you'd be definitely handicapped in the operation of the collection of gas, would you not? A. Well, I can hardly imagine a gathering operation so simple that there was nothing but pipe in it. It certainly would

[5274]

have some valves or some other fittings.

Q. Now I'd like for you to turn to Exhibit No. 104. Exhibit 104 is a map of the Pampa area, including Gray County and parts of Wheeler, Carson and Hutchinson County, is that correct? A. Yes, parts of those counties.

Q. I note on this exhibit in a portion of the lower left-hand corner an arrow that is labeled "Annie Booster". Do you see that? A. Yes.

Q. What is the function of that field booster? A. That is a part of the gathering facilities for gathering gas.

Q. What does it do? A. It draws gas from two leases in the area nearby and elevates the pressure into another line nearby which is collecting gas from other wells in the vicinity. In this case the Annie Booster is picking up casing-head gas at relatively low pressure and elevating its pressure to oppose the pressure in the line into which it is delivered which is serving principally otherwise wells which produce natural gas only.

Q. And that line into which the Annie Booster delivers this casing-head gas furnishes a portion of the gas processed at Pampa, Bowers and Gray plant, does it not? A. You say the line into which the Annie discharges?

[5275]

Q. Yes. A. A portion of Pampa—beg pardon?

Q. Pampa, Bowers and Gray plant. A. Yes, that is right, that gas collected in that area through the Annie Booster and its compressors and from the dry gas wells in the area otherwise at natural well pressure is delivered in part to Pampa, Bowers and Gray plants.

[5276]

Q. Now, to the east in Wheeler County, I notice a gray arrow on the map designated "Wheeler Booster".

A. Yes, sir.

Q. What is the function of that booster? A. That is a part of the gathering facilities supplying gas to Gray plant and Lefors plant. Its purpose is to draw gas in from the various wells and leases on the downstream side and elevating that pressure, the pressure of that gas, so that it is sufficient for the pipe line, the gathering line from that point on in, to Gray plant and by Lefors to transport the gas as a part of the collection there that is available.

Q. And part of the gas that is boosted at the Wheeler Booster is taken over through a tie-over and processed at the Lefors plant? A. Yes, sir, a part of that gas is taken off there and other gas from local areas about Lefors is also processed in Lefors.

Q. And the gas that is compressed at the Wheeler Booster is partly casing-head gas, is it not? A. That is correct.

Q. And the gas that is compressed in the Wheeler Booster that is not taken off at Lefors plant goes on down

the pipe line in a westerly direction and at a point three or four miles west of the Lefors plant I observe

[5277]

a gray arrow marked "Red Booster". A. Yes.

Q. What is the function of that booster? A. That booster has the same function as Wheeler Booster for gas in and around the Red Booster, except that the gas which is discharged by Red Booster into the adjacent gathering line into Gray Plant all goes to Gray plant and none of it to Lefors plant.

Q. Is that Red Booster a gathering facility? A. Yes, sir.

Q. But it is not pipe line? A. Well, no, the booster in its entirety certainly is not a pipe line.

Q. I believe you have heretofore testified that the red lines on Exhibit 104 were raw gas gathering lines, did you not? A. Yes, I have. I was just looking to see if there was any other confusion of shades here to contend with, but it seems to me they are clear here, that they are still bright red lines and I don't believe there is much confusion with any other shade. They are gathering lines.

[5278]

Q. And do they have there in that system of gathering lines the other mechanical installations and devices which you said were utilized in connection with the raw gas gathering system shown on Exhibit 111? A. Yes. I believe in this system, yes, all of the things I named otherwise are somewhere found in these facilities, among these facilities.

Q. And are such facilities gathering facilities although they are not gathering lines? A. Yes, they are all part of the gathering facilities.

MR. McALLISTER: Mr. Examiner, of course, the witness is testifying to conclusions, and I want it recognized on the record that when someone tries to find out a little later on, he may also be asked to express conclusions.

BY MR. SPARKS:

Q. As you have stated in your testimony here this morning that certain facilities were gathering facilities or gathering lines, state what was the basis of your testimony in that regard. A. Well, that is what we regard them as and what we call them in our operations. We have for years more often than otherwise referred to those facilities in the aggregate as part of the gathering facilities. We also know that they are so considered and regarded by, I'd say, the industry generally because we know from our contacts and our operations jointly with others that they regard the facilities in the same way as we, and so classify

[5279]

them.

Q. That is the basis of your testimony? A. That is right.

Q. Very well. Now turn to Exhibit 91. This exhibit is a map of the Goldsmith area in Ector and adjoining counties in West Texas, is it not? A. Yes. It is a map showing portions of Andrews, Crane, Ector, Winkler and other counties, but principally the area surrounding what is termed the Goldsmith area.

Q. And also the area surrounding the Judkins plant?

A. Yes, and the other features shown on it.

Q. There is on the exhibit an orange arrow which is labeled "Harper Booster". Do you find that? A. Yes, sir.

Q. Assuming that that Harper Booster is performing the function of compressing the gas collected through the red lines shown on the map to lead into the booster, and moving it through the red line leading to the Judkins plant, is that a gathering facility, the Harper Booster—

MR. McALLISTER (interrupting): I object, Mr. Examiner.

BY MR. SPARKS:

Q. (Continuing)—within your concept of gathering facilities as you have defined it here and as it is understood in the industry?

MR. McALLISTER: I object, Mr. Examiner. In the first place,

[5280]

he asked the witness to presume something that he is presumed to know in this record. In the second place I object to him attempting to speak for the industry. He is not qualified in anyway to speak for the industry. He can speak for himself. He has not shown himself by anything that has been demonstrated here that there is any understanding in the industry that he is the spokesman for the industry.

MR. SPARKS: Mr. McAllister knows that is not a valid objection.

MR. McALLISTER: I do know it is a valid proposition.

MR. SPARKS: No one is attempting to have the wit-

ness speak as a spokesman for the industry, of course. It is not the basis of his testimony, and I think it is perfectly obvious that a man who has had the experience in the business and in an industry is qualified to speak concerning the understanding of the industry with reference to the meaning and use of terminology. There isn't any question about that whatever, and that is the sense in which the questions in that regard have been asked and answered.

PRESIDING EXAMINER: I don't know about the understanding, but it seems to me he would be qualified to testify as to the use of terminology within the industry.

MR. SPARKS: That is the basis upon which he has been testifying.

MR. McALLISTER: There are individuals in the industry

[5281]

that have an entirely erroneous concept.

PRESIDING EXAMINER: There are individuals in the industry, you say?

MR. McALLISTER: Yes.

PRESIDING EXAMINER: I think that is probably true.

MR. McALLISTER: It is just like some people are known by certain names, but that doesn't mean that is what they are.

PRESIDING EXAMINER: I think that goes to the weight of the evidence rather than the qualifications of the witness or the competence of the evidence.

MR. SPARKS: I'll withdraw the question. I want to

ask Mr. Bunn if he knows the operation and functions performed by the Harper Booster.

THE WITNESS: I was uncertain a day or so ago. I had forgotten which way we switched that plant, as I believe I testified. It is operating as a booster station moving gas into Judkins plant.

[5282]

BY MR. SPARKS:

Q. No processing is done at the Harper Booster? A. No, sir.

Q. Within your concept of the gathering function and your understanding of that concept as it is known and understood in the industry, is the Harper Booster a gathering facility? A. It is.

MR. McALLISTER: I object, Mr. Examiner. Of course, the witness has answered the question when he heard me voicing my objection.

PRESIDING EXAMINER: Strike out the answer.

Let's divide that into two questions.

Read the question, please.

(Question read by the reporter.)

MR. SPARKS: All right.

BY MR. SPARKS:

Q. Within the concept of gathering as it is known and understood in the industry—

MR. McALLISTER: I object, Mr. Examiner. It is an oft repeated—

MR. SPARKS: (interrupting): Let me finish the question.

MR. McALLISTER: I mean it is five minutes since you stopped talking.

PRESIDING EXAMINER: All right, Mr. Sparks, go ahead

[5283]

and finish your question.

MR. McALLISTER: I want the record to show, Mr. Examiner, at this point, that he had stopped and had paused and I voiced my objection and he gets redheaded over it.

MR. SPARKS: The record shows I obviously hadn't finished the question. All he was trying to do was interrupt.

MR. McALLISTER: I don't pursue your tactics.

PRESIDING EXAMINER: All right, go ahead.

Do you wish the question read up to this point?

MR. SPARKS: No, sir, I can restate the question.

BY MR. SPARKS:

Q. Mr. Bunn, as you understand the concept of the function of gathering as it is known and understood in the industry is the Wheeler Booster a gathering facility?

MR. McALLISTER: I object, Mr. Examiner.

PRESIDING EXAMINER: The objection is overruled.

MR. McALLISTER: May I have an understanding if this witness is going to speak for the industry, I don't want to have to voice an objection after every question. Now, that is all he is asking him is it known in the industry, is it known in the industry, without describing the function or giving any reason for it. He can speak for himself, he can speak for Phillips, but he is not shown here in any manner, shape or form to have an

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understanding of the usage that it would have a uniform meaning. There is none of those showings here. I just want that general objection to the record and I don't care how far the witness goes, but I don't want to have to be running a race each time with the witness and counsel to try and determine when the question is completed and when the witness is going to begin to answer the question.

PRESIDING EXAMINER: The objection is overruled. Answer the question.

THE WITNESS: Now I'd like to have the question read.

PRESIDING EXAMINER: Read the question.

(Question read by the reporter.)

THE WITNESS: Yes, it is. In accordance with my associations and contracts with many, many operators in the industry, partly in joint operations, partnership operations with them, in connection with the buying and selling of facilities and lines, and in considering such matters whether or not we buy or sell. I don't say that as a matter of concept of the industry from the standpoint of representing the industry and speaking for them as their official agent, nor that I have polled every single operator in the industry as to just what he thinks or does, but from many years of such associations as I have described I know what they normally consider and call such facilities as the Harper Booster.

[5288]

* * *

THE WITNESS: In connection with the Judkins red line system including the Harper Booster which is a part of that system there are involved in the gathering facilities compressors, cooling towers, meters, water tanks, valves, regulators, pressure gauging instruments, temperature gauging instruments, houses and other buildings used in connection with it, all of which are regarded as a part of the gathering facilities.

BY MR. SPARKS:

Q. And necessary to carry on the operation of production and gathering? A. Yes.

Q. Leading out of the Goldsmith plant, to confine the question, there are also green lines through which residue gas is returned to some of the leases supplying gas which goes to the plant, is that correct? A. Supplying gas what?

Q. To some of the leases which supply gas that goes to the plant? A. Yes, they are delivering the green line, the green lines are for the purpose of delivering, and they do deliver, gas for lease operations and developments on some of the leases which

[5289]

supply gas to the plant.

Q. You have stated that those green lines or residue return lines are gathering lines within your concept of the function of gathering, did you not? A. Yes. They are encompassed in the entire operation of gathering.

Q. Are they ordinarily referred to as gathering lines?

A. No, they are not. They are ordinarily referred to as residue lines or, taken together with the red lines, the red and green lines are very often referred to in the aggregate as field lines.

Q. Are they a part of the gathering facilities? A. They are a part of the gathering facilities in the performance of the entire operation of gathering.

Q. I wish you'd turn now to Exhibit 45-D. Do you have that? A. Yes, I have that.

MR. McALLISTER: Did you say "B" or "D"?

MR. SPARKS: "D".

MR. McALLISTER: The Dumas plant?

MR. SPARKS: That is right.

THE WITNESS: Yes, that is what I understood.

MR. McALLISTER: O. K.

BY MR. SPARKS:

Q. I'd like you also to turn to the aerial photograph

[5290]

of Dumas plant, which is Exhibit 113. A. Yes, I have 113.

Q. Looking first at Exhibit 45-D, the flow diagram of the Dumas plant, after the raw gas enters the plant, the plant yard, from the east it passes through three inlet scrubbers as shown on the diagram, does it not? A. That is right.

Q. Are those scrubbers pipe lines? A. No, they are not normally called pipe lines. They may be a pipe line installation but they are themselves not called pipe lines.

Q. Are they gathering facilities? A. They are. They

may be—yes, they are gathering facilities in the total operation of gathering.

Q. And then the gas passes through some meters and goes through a gas treater where the hydrogen sulphide content of the gas is diminished, is that right? A. That is right.

Q. Is that gas treater a pipe line? A. No, it wouldn't be so classified ordinarily.

Q. Does it have pipe in it? A. Yes.

Q. Is it a gathering facility? A. It is a part of the gathering facilities, yes. It conditions the gas for at least a part of its disposal.

[5291]

Q. Then the gas together with some vapors passes through six plant absorbers as shown on the diagram? A. Yes, sir.

Q. Those absorbers are not pipe lines, are they? A. No, they are not regarded in common conversations as pipe lines.

Q. Are they gathering facilities? A. They are.

Q. There are other mechanical installations shown on the flow sheet, flash tanks, H. S. high stage, accumulator, primary vent tank, make tank, secondary vent tank, and then there is a reference to a fractionator. None of those facilities are pipe lines, are they? A. The vessels so labeled, no, are not pipe lines. They may be installed in pipe system but are of themselves not pipe lines.

Q. They are connected with a pipe line, are they not? A. Oh, yes.

Q. Are they part of the gathering facilities? A. They are.

Q. And the flow diagram also shows a boiler house, a generator building and a compressor building. While those buildings have piping in them, they are not pipe lines as such, are they? A. No, they are not referred to as pipe lines.

[5296]

* * *

THE WITNESS: Those lines we would commonly call water lines are not gas gathering lines, no. They don't gather gas directly, but they are a part of the gathering facilities.

BY MR. SPARKS:

Q. Are there also steam lines at the plant? A. Yes, sir, there are steam lines.

Q. Is what you have said with regard to water lines also true as to steam lines? A. Yes, sir. I might say that there are some lines that carry both steam and gas and there are some lines that carry both water and gas, but those we would call water lines would be lines that would carry water only and would not be in themselves gas gathering lines, but would be a part of the gathering facilities.

BY MR. McALLISTER:

[5297]

Q. Drinking water, for instance? A. Any kind of water they might carry, where their function is water carrying primarily.

BY MR. SPARKS:

Q. The gathering operation requires a lot more than pipe lines to carry it on, does it not? A. Yes, sir.

Q. Now, Mr. Bunn, I wish you'd turn to Exhibit 45-A. A. I have it.

Q. There are shown on the flow sheet, Exhibit 45-A, both with regard to the Sherman and the Hansford plant numerous vessels and mechanical devices which are not pipe lines, isn't that correct? A. Yes, sir.

Q. But they are part of the gathering facilities? A. That is correct.

Q. That would include the camp houses of the employees who work at the plant, would it not? A. They are not shown on the diagram.

Q. They are not shown on the diagram— A. (Interrupting.) The houses, however, which are nearby and for the occupancy of the workmen who carry on the operation of gathering, those are—we classify those as a part of our gathering facilities.

[5298]

Q. And those houses are shown on the photograph, Exhibit 117-B, are they not? A. Yes. They may be seen in the photograph, Exhibit 117.

Q. 117 and 117-B also? A. Yes, 117 and 117-B.

Q. Those three photographs, Exhibit 117, 117-A and 117-B clearly discloses that there are numerous facilities and mechanical devices, vessels, at the Sherman plant and Hansford Plant in addition to piping and pipe lines, is there not? A. You say in addition to piping or pipe lines?

Q. Yes. A. Yes, there are many items that may be

readily discernible at the Sherman and Hansford plants from the photographs that would not be called pipe lines.

Q. And all of those facilities are necessary to condition the gas for disposals within your concept of gathering, is that right? A. All of the gas facilities, you say?

Q. Yes. A. In the plant?

Q. Yes. A. Yes, those facilities are for conditioning the gas for disposal or incorporated in the disposal itself

[5299]

in some cases.

Q. And many of the facilities which are necessary to condition the gas for disposal and to make the disposition do not appear on the diagram which is the flow sheet, Exhibit 45-A? A. Well, there are many that do not appear that could not be discerned readily from the photographs, yes.

Q. Very well, now, Mr. Bunn, will you turn to Exhibit 45-B. This is the diagram of the gas flow and some of the facilities of the Sneed plant, is it not? A. That is right.

Q. I believe that gas which Phillips sells to Panhandle Eastern, as you have testified, comes into the plant through a line at the east side of the plant which is marked "24-inch field gas to plant". A. That is right.

Q. It goes through some scrubbers— A. (Interrupting.) That line carries a part of the gas sold to Panhandle Eastern. I mean part of the gas that the line carries is sold to Panhandle Eastern.

Q. And it carries all of the gas that is sold to Panhandle Eastern? A. Yes.

MR. McALLISTER: What was that last question? It carries all the gas?

[5300]

PRESIDING EXAMINER: Read the question.

(Question read by the reporter.)

MR. SPARKS: I think it may not be clear on the record and I think it ought to be made clear.

BY MR. SPARKS:

Q. Part of the gas that comes into the plant is taken off after the gas goes through the gas treater and goes through a line marked "6-inch gas to re-absorber" and the gas that goes through that 6-inch line, none of it is sold to Panhandle Eastern, is that right? A. No, nor is that part of the raw gas removed in the gas treater sold to them.

Q. After the main body of the gas comes through the gas treater it moves through a 20-inch line to a point at the division fence between the Phillips and Panhandle Eastern property through a line which is marked "20-inch treated gas to Panhandle Eastern"? A. That is right.

Q. And the delivery of the gas is made at or very near that fence line to Panhandle Eastern? A. Yes. The gas is turned over to Panhandle Eastern at that property line.

* * *

[5311]

Q. Mr. Bunn, even though the line labeled "24-inch raw gas from Panhandle Eastern" and the absorbers and the lines carrying the plant fractionator overhead and vaporized

[5312]

liquids and the green line labeled "24-inch residue to Panhandle Eastern" were not gathering lines, are they transmission lines and transmission facilities?

* * *

[5313]

Q. Are the lines to which I referred in my previous question and the facilities to which I referred transmission lines and facilities? A. No, I don't think so. They are, as I have said earlier, I would say incidental to Panhandle Eastern's gathering of gas in that they serve in helping to condition the gas before it passes on. In any case they are merely processing lines for the treatment of the Panhandle Eastern Gas by Phillips Petroleum Company.

[5314]

Q. Insofar as they carry gas delivered by Phillips to Panhandle Eastern through the line marked "20-inch treated gas to Panhandle Eastern" are they also incidental to Phillips gathering? A. Yes.

MR. SPARKS: I am through with this exhibit if you wish to ask any questions at this time, Mr. McAllister, you can go right ahead.

MR. McALLISTER: No, I have a lot of other questions with respect to other exhibits, and I'd prefer to take up the cross-examination in sequence. Are you about through, though?

BY MR. SPARKS:

Q. Very well, will you turn now to Exhibit 45-E-1.

That exhibit reflects a diagram of the gas flow at the Eunice plant? A. Yes.

Q. It also shows a number of facilities, buildings, vessels, in addition to pipe lines, does it not? A. Yes. It indicates on its face a number of items such as you described.

Q. Are those other facilities shown on the flow sheet a part of the gathering facilities utilized by Phillips Petroleum Company in the collection, conditioning and disposal of the gas at that plant? A. Yes.

Q. And as such are they gathering facilities? A. They are part of the gathering facilities at this plant and in this system.

[5315]

Q. Now, I believe— A. (Interrupting) I should qualify that with reference to the exhibit as a whole to the extent to say that there is one line on here which is not a part of the gathering facilities in that it is for the purchase of gas from another concern for fuel.

Q. Is that the line which is labeled "treated gas from Witco"? A. Yes.

Q. Are there other facilities and mechanical devices utilized in connection with the operations at the Eunice plant which are not shown on the flow diagram which is Exhibit 45-E-1, but which are a part of the facilities used in connection with the collection, conditioning and disposition of gas at that plant? A. Yes. They are a part of the system which effects the complete operation of gathering gas.

Q. Are the vent lines and the flares a part of such facilities? A. Yes. I believe I indicated so before.

MR. McALLISTER: Are you looking at a photograph now?

THE WITNESS: I'm looking at the Exhibit 45-E-1, which does not show all the flare lines but does indicate a line to the flare in one instance. However, the question had to do with other equipment, not all of which is shown.

[5316]

BY MR. SPARKS:

Q. Do those facilities include camp houses utilized by employees that operate and maintain the gathering lines and other gathering facilities? A. Yes, sir.

Q. Very well. Turn to Exhibit 45-F-1. That exhibit is a flow sheet of the flow of gas at the Fullerton plant, is it not? A. That is right.

Q. And does the flow sheet show on its face vessels, buildings, compressors, furnaces and other mechanical devices which are not pipe lines but which are necessary facilities utilized in conjunction with the gathering of gas? A. Yes. The devices or equipment, some of which you have enumerated, are not shown as such on here, but are indicated, as for instance the block for compressors and such. A. And in addition to those which are indicated on the diagram are there others in the plant which although not pipe lines are necessary facilities utilized in the collection, conditioning and disposal of the gas?

MR. McALLISTER: I object, Mr. Examiner. There are other things in the plant, why, I suppose, there is nuts and bolts and screws and baling wire. I don't know what kind of a plant it is, but if there is something that is impor-

tant to this let's have it, let's name it, instead of just trying to lump all of the other

[5317]

facilities that may be in there. I suppose there is nails and maybe they have some rock and some earth piled in some corner to hold down a pipe and I suppose that is what he is referring to.

PRESIDING EXAMINER: I suppose that will be developed.

MR. McALLISTER: I mean he just said there are other things. Read the question. What in the world are we to understand by the question?

PRESIDING EXAMINER: The objection is overruled. Answer the question.

THE WITNESS: There are a number of other items of equipment that are used in performing the function of gathering which are not shown in the diagram. There are also plant houses for occupancy of employees, which are not shown on the diagram, but are adjacent to the plant which would be regarded also as a part of the combined gathering facilities.

BY MR. SPARKS:

Q. Are there not also pipes in the plant which are not gas gathering lines?

MR. McALLISTER: I object, Mr. Examiner. It is another one of those questions that doesn't mean a single thing.

PRESIDING EXAMINER: The objection is overruled.

THE WITNESS: Yes, there are a number of lines that

would not be called gas gathering lines ordinarily. They are lines that carry steam and so forth that would not be called gas gathering

[5318]

lines ordinarily at all. They are, however, a part of the gathering facilities, in that they perform as an adjunct to the combined operation of gathering.

Q. Now turn to Exhibit 45-G-1. I believe I want you to direct your attention first to a raw gas line coming from El Paso Natural Gas Company as shown on the diagram through two meters labeled "24-inch 600-pound wet gas from El Paso" and a green line going to the right on the sketch and then turning at right angles through a block labeled "two meters" and labeled "24-inch 600-pound residue gas to El Paso". A. Yes, I see those lines.

Q. I believe you have stated in your testimony that those lines were incidental to Phillips gathering, and I believe at another point in your testimony you stated that Phillips gathering had been completed at the time of delivery of the gas to El Paso through the line which is labeled "24-inch 50-pound wet gas to El Paso"? A. Yes, I recall there is some confusion in what I had said on the two occasions in reading the record. In one instance, I believe in connection with the questions asked, when I may have indicated that is the end of gathering where the red line labeled "50-pound wet gas line to El Paso" reaches the point of delivery, was the end of gathering. I made a erroneous statement and not at all consistent with the statement I had made otherwise or that I think the facts bear out as to the operations, because

[5319]

those lines as I see them, the two you have referred to, the 600-pound wet gas line from El Paso, a red line, and the 600-pound residue gas to El Paso, a green line on 45-G-1, are incident to the conditioning of the gas which El Paso buys from Phillips and eventually takes down its pipe lines. The gasoline is not extracted from the gas originally delivered to El Paso through the red line labeled "50-pound wet gas line to El Paso" and is therefore not conditioned for the disposal to El Paso. The two lines, 24-inch 600-pound residue gas to El Paso and the 24-inch line labeled "600-pound wet gas from El Paso" are both incident to the gathering of the gas by Phillips in that they are necessary to convey the gas for conditioning from and back to El Paso.

Q. Are those two 600-pound lines, the one marked wet gas and the other marked residue gas, and the 600-pound absorber transportation lines or transportation facilities?

MR. McALLISTER: I object, Mr. Examiner. It calls for a conclusion of the witness and the witness has not defined the term that counsel seeks him to use and it has not been defined by counsel in the question.

PRESIDING EXAMINER: The objection is overruled.

MR. McALLISTER: Note an exception?

PRESIDING EXAMINER: Note an exception.

THE WITNESS: Certainly I wouldn't call them transmission lines in that they serve the purpose only of moving the gas in a

[5320]

loop through Phillips facility and serve no direct purpose

in advancing it through El Paso's facilities, through El Paso's pipe line facilities.

BY MR. SPARKS:

Q. There is shown on this sketch, 45-G-1. A. 45 which?

Q. G-1, for the Goldsmith plant, in addition to the pipe, piping or pipe line, whichever you want to call it, a number of vessels or diagrammatic suggestions of facilities such as the dehydrator and plant gas treater and compressor building and compressors, inlet scrubbers, high stage injection compressors. Are all of those facilities facilities used in conjunction with the collection, conditioning and disposition of the gas by Phillips? A. Yes, all those that you named are. There are some facilities indicated on the diagram which are not a part of those facilities, such as Sid Richardson Carbon Black Company. That is not meant to be a plant or if it is it isn't a part of Phillips' facilities.

Q. That is true also of the block that is labeled "El Paso Natural Gas Company"? A. That is right.

Q. Are there other facilities and equipment in this plant which is not shown on the flow sheet or exhibit? A. Yes, there is considerable equipment in the plant that is not indicated or labeled or shown, which is used in connection

[5321]

with the collecting, conditioning and disposing of the gas which comes to the plant.

Q. And are there other lines, pipe lines or piping? A. Yes, there are many other pipes and lines, some short sections of pipe line through the plant, some carrying water, some carrying steam and other substances, all of which are

included as a part of the facilities for the over-all functioning of gathering the gas.

Q. Very well. Now turn to Exhibit 45-H-1. That exhibit indicates diagrammatically the flow of gas in the Crane plant, does it not? A. Yes, that is right.

Q. The exhibit also indicates diagrammatically facilities such as cooling towers, engine room, vessels, absorbers, various tanks, gas treater, and numerous meters, which are not pipe lines? A. No, none of those items as you mentioned them would be called pipes or pipe lines.

Q. Are all of those facilities shown on the diagram, such as these facilities shown on the diagram, utilized in connection with and a necessary part of the collection of the gas, conditioning of the gas and disposal? A. Yes, they are a part of the over-all gathering facilities.

Q. Does that include the green residue lines or to make that more specific does that include the green residue line

[5322]

which is markd "24-inch" and also marked "residue to El Paso"? A. Yes, that is a part of such facilities out to the point where Phillips turns the gas over to El Paso.

Q. Does it include the green line which is marked "flare"? A. Yes.

Q. Are there other facilities in that plant which are not shown on the diagram? A. There are a great many facilities not shown on the diagram used in the performance of collecting, conditioning, and disposing of the gas. There are also houses adjacent to the plant shown on the diagram for the occupancy of the employees which take care of and

operate the gathering facilities that have been mentioned and they are considered a part of over-all gathering facilities.

Q. I believe I failed to ask you about Exhibit 45-C. Will you turn to that one, please. That diagram shows certain facilities at the Gray plant, and my questions to you will be with reference to the area that is marked "Gray plant" and enclosed by— A. (Interrupting) And what?

Q. And enclosed by a fence, which is a dash-X line on the exhibit. The exhibit shows on its face intake compressor in a block and absorbers in a block. Those are facilities which are used in connection with the collection, conditioning and disposal of the gas at that plant which are not pipe lines?

[5323]

A. Yes. Those labels indicate equipment which are not themselves pipe lines. There is other equipment in the plant also than that indicated which is not, may not be called, pipe lines and some which is called piping or pipe lines in some cases, which is a part of the facilities in the over-all function of gathering in the Gray plant system.

Q. Do all the facilities in that Gray plant which belong to Phillips constitute a part of the facilities by which Phillips collects, conditions and disposes of the gas at that plant? A. They are.

* * *

[5403]

BY MR. McALLISTER:

* * *

Q. Then I asked you another question, and I said does gathering, according to your concept, then end

[5404]

at the exact same point where the gas is turned over to Panhandle? A. The gathering itself which, in the case of this disposal, involves the sale as an incident to it, to that gathering and to that disposal, in my opinion, because the sale question is a legal concept in my opinion, does not end except on completion of the sale, which in my concept, would include not only the physical turning over of the gas but would include the billing for it and the collection of the money.

Q. Then does Phillips continue to own the gas all the way through the Panhandle line until such time in the future Phillips bills for the gas and gets payment for it?

A. I don't know. I wouldn't think so, but I don't know.

Q. You don't know that? A. If they didn't pay us for it at sometime or other, I'd like to know the answer to that one.

Q. Even though it went into Milwaukee and somebody had already burned the gas up there, why, it is still Phillips gas until they get paid for it, is that right? A. There wouldn't be any gas if it is already burned up, I don't believe.

* * *

[5420]

Q. Yes, that is the answer I wanted. You talked about the houses around there. If they were to burn down tomor-

row or is it going to effect the functioning of the gasoline plant? A. It might.

Q. How? A. Well, the plant might be exposed and shut down in the fire that burned the houses.

Q. I said yesterday. The fire is out now. A. Well, the plant might still be down, too.

Q. Just getting right down to brass tacks, it is a facility that may be provided in the way of a camp or housing, but it in no way functions as a part of the processing plant, it is merely a place for some people to live? A. That is what it's for. It is a place to live and there are several alternatives in that connection of housing people

[5421]

just the same as there are several alternatives in collecting and processing.

Q. Even if they slept in a tent the plant can go on without the houses, is that right? A. If the houses are there or the tent is there, it is Phillips Petroleum Company's property and they have had to provide it under the circumstances, then it is an adjunct to the whole operation.

Q. All right, if you call it adjunct then I haven't any more questions about it. A. It is a facility and if you want to be more precise than I sometimes am or no how to be, it is an incidental one at least.

Q. As long as we make it plain what its function is we don't have to worry about it? A. That is what I thought.

Q. I suppose the plant fence is in the same category? A. Yes, I'd so classify it.

Q. And I suppose you are still sticking to the idea that the vent pipe up in the air 40 feet or so is a gathering line?

A. If it is connected, if it is not a piece of pipe as you say.

Q. I mean for the purposes of this question it is connected and when you light it there is a flame out of the top of it? A. It is now connected?

[5422]

Q. Yes. A. It is one of the facilities, yes, sir. It is a facility for disposal and a very important one.

Q. And it is a gathering line in that respect? A. It is a part of the whole gathering system as I said before.

Q. It is a gathering line, I don't want to get away from that, because you have said it about 40 times and if you are going to change it— A. (Interrupting) No, sir, I have said that and I still say it is a gathering line in the performance of the entire function of gathering.

Q. What is the real distinction between facilities, gathering facilities, and facilities incidental to gathering? A. Well, the distinction that I make is that those facilities that are involved directly in the physical operations of the collection, the conditioning or qualifying of the gas and the disposal are gathering facilities, and other things which do not enter so directly in the first turn-over of the gas in connection with the disposal, but still perform part of the total gathering operation, would be incidental or would be supplemental in any case to the direct facilities, such as the office that I spoke about or the dwelling houses, they would be, I think more properly said to be incidental gathering facilities.

Q. If you went down to that office and sat down in one of

[5423]

the chairs in the office, then you become incidental to gathering, is that it? A. No, I don't think I would be a facility.

Q. Well, the chair is? A. Well, if it is our property and needed there, yes, it would be an incidental facility. The pencils and the paper we write on, those would be.

Q. And if you went down there and you got an automobile to ride you around and around the plant to look at it, why, the automobile is incidental to gathering? A. We certainly regard our automotive equipment that is located at these plants as incidental facilities to the operation.

Q. I didn't say that, I say incidental to gathering? A. I say to our operations which is gathering in most of the instances we have been talking about in these plants.

Q. Those automobiles are incidental to gathering or do we have to take up this word operation and fuss with that? A. I think that is a better term to use, because while they enter in some respects directly into the handling of the gas, such as the testing equipment, which is automotive equipment and the meter equipment and so forth, but even at that I think they would be termed as incidental facilities. We set them up in our plant there as a part of the cost of the thing.

* * *

[5445]

Q. I said where in relation to the delivery points from

those nine plants does gathering end, according to your concept.

[5446]

That is all. It is a very specific question, and it is a very definite one, and I want it not in general terms but I want it in specific terms in relation to each of the nine if you can give it to me. You have said all afternoon you couldn't be specific? A. And I'm telling you now that I can't tell you because with respect to gathering, which you have asked, as regards those points, gathering in our concept involves the sale, and I don't know where the sale is. That is a legal thing that I don't know.

Q. That is the first time you have said that? A. No, I have said that all afternoon.

Q. No you haven't. That is a new one, it is the first time you said it. A. I have said sale is an incident to gathering.

Q. You have stalled all around sales, that is the first time you said that. So now the sale is a part of gathering? A. I have said quite a number of times that the sale is an incident to gathering.

Q. You have said it is something that follows it, and now you are saying it is a part of gathering? A. I didn't say it followed it, I said I didn't know what constituted it. That is the thing I wanted a legal opinion about.

Q. If you don't know what constitutes a sale, how do you

[5447]

know it is a part of gathering? A. I'm saying that has

been our concept of it, that when we build a facility we try to sell gas and as you suggested in one of the presumptions a while ago, usually one of the things we may do at the outset is to try and make a contract with someone who wants the gas and then we provide the facility to make the disposal.

* * *

[5485]

MR. McALLISTER: At this time and in aid of Mr. Sparks' argument, Mr. Examiner, I offer a stipulation which has been entered into between the Staff counsel and counsel for Phillips Petroleum Company and ask that the stipulation be copied into the record.

[5486]

PRESIDING EXAMINER: Is there any objection?

(No response.)

PRESIDING EXAMINER: Have copies of the stipulation be made available to the other counsel.

MR. McALLISTER: There have been no other counsel here except that it was made available to Mr. Lee and Mr. Joffe, Mr. Torkelson of the Wisconsin Commission and they stated to me that they had no objection.

You will recall at the time I discussed the matter of probable ability to enter into a stipulation that we took a recess for a half a day, and I stated at or about that time that we had not taken in this stipulation in any way to deal with the matters which the City of Kansas City, Missouri had undertaken to prove through witnesses with respect to the movement of gas sold and delivered by

Phillips Petroleum Company to Cities Service Gas Company. In the first place Mr. Joffe was not here at that time to aid in the formulation of the stipulation, and I have since called his attention to the statement made and he said it was satisfactory to him.

PRESIDING EXAMINER: Mr. Tulane, of course, is here. I wonder if he had seen a copy of it.

MR. TULANE: Had Mr. Torkelson looked it over?

[5487]

MR. McALLISTER: He did. There may be some changes in here, but it was merely a word changing.

MR. TULANE: Well, I am satisfied, then, that it is substantially correct.

* * *

PRESIDING EXAMINER: The stipulation referred to by Staff Counsel has been approved by the Examiner and will be transcribed in the transcript at this point and, of course, filed with the Secretary of the Commission.

[NOTE: This stipulation appears in the Joint Appendix as Appendix B following the dissenting opinion of Commissioner Buchanan which may be found on Record pages 10,955-10,959. It is not printed here to avoid duplication.]

[5519]

PRESIDING EXAMINER: Exhibits 3 to 7, inclusive, are obviously quite relevant to a rate proceeding, but I can see no relevance of these exhibits to the question of jurisdiction.

The objection is, therefore, sustained to Exhibits 3, 4, 5, 6 and 7. They will be marked excluded, offer of proof, exception and filed with the commission.

* * *

[5528]

B. P. STOCKWELL

was called as a witness, and after having been first duly sworn, was examined and testified as follows:

Direct Examination by Mr. McAllister

Q. Mr. Stockwell, what is your name, please? A. B. P. Stockwell.

Q. Where do you reside? A. Kansas City at the present time.

Q. Kansas City, Kansas? A. Kansas City, Missouri.

Q. I believe you are employed by the Federal Power Commission?

[5529]

A. I am.

Q. In what capacity? A. Natural gas engineer.

* * *

[5534]

Q. Mr. Stockwell, what do you understand by the term gathering as it is used in the natural gas industry? A. Gathering is a descriptive term used to describe operations by which gas is produced from a number of wells and assembled at a common point through connecting pipe

[5535]

lines generally referred to as field lines.

Q. In that definition, as you have given it, what do you mean by the phrase "common point"?

* * *

[5536]

Q. Referring to the last question I gave you, Mr. Stockwell, will you give your answer beginning at the first?
A. I believe you asked me what I referred to as common point?

Q. That is right. A. I consider it that point at which gas from a group of wells is assembled into a common line which line is designed and built to carry or convey that volume of gas either to a processing plant or to a pipe line, transmission line.

Q. You meant when you referred to pipe line there, you are referring to a transmission line as distinguished from another field line? A. I am referring to a transmission line.

Q. When does gathering end? A. Gathering of gas cannot extend beyond the point

[5537]

where common pipe line enters the processing plant or connects with a transmission line. Gathering may, however, under certain circumstances end at a point short of the processing plant. It is impossible to state in general terms where gathering will end in all circumstances. I have undertaken only to fix an ultimate limit of gathering in my statement of where gathering ends.

BY MR. SPARKS:

Q. Are you reading your answers, Mr. Stockwell?

MR. McALLISTER: Yes, he is.

MR. SPARKS: I have no objection. It just appeared that he was and I just thought—

MR. McALLISTER (interrupting): I have asked him to make them exact.

BY MR. McALLISTER:

Q. Mr. Stockwell, what do you understand by the term processing plant? A. The term processing point generally describes plants wherein heavy hydrocarbons are extracted from natural gas or where gas is treated for the removal of sulphur or for the purpose of dehydration. Any one or all three of these processes may be consummated at one point or in one plant. This process may also be performed at other places than in the field, such as places along a transmission line.

* * *

[5538]

Q. Do you mean by your last statement, Mr. Stockwell, that processing is entirely unrelated to gathering?

A. It most certainly is. It is an individual process in itself and is not related to any other, necessarily related to any other, gas operation.

Q. From your experience in the natural gas industry can you give us some examples to show that processing is a distinct operation separate from gathering? A. Yes, I believe I can. When I was operating in Oklahoma during the years 1926 to '31 I operated a gas production and trans-

mission system near the town of Bristow, Oklahoma. The gas was produced, gathered and brought to a common point about seven miles north of the City of Bristow, where it entered the transmission system and was transported to a point about a half mile north of Bristow where it was then processed in a gasoline plant and from that point transported to for distribution and sale. In that case the processing plant was not close

[5539]

to the gathering system and not connected with it, only through a pipe line, a transmission line.

Q. When you referred to processing there, what was the purpose of the processing in that plant? A. I didn't understand you.

Q. What was the processing in that plant? A. We were extracting the gasoline from the gas by the absorption method.

Q. Can you give us another example? A. Well on Panhandle Eastern Pipe Line Company system they assemble gas purchased and produced at Hugoton compressor station where gas is brought to transmission line pressure by compressors, and transmitted through a 26-inch line a distance of approximately 27 and a half miles to the Liberal gasoline plant near Liberal, Kansas, where this gas is processed to extract heavy hydrocarbons and so forth.

Q. Can you give us still another example? A. There is another example of the same kind on Panhandle where they assemble certain gas they have produced and purchased in the Hugoton field at Satanda station, where this

gas is compressed to transmission line pressure and then is likewise transported a distance of approximately 26 miles to Liberal gasoline plant, where it is processed to remove heavy hydrocarbon. Both these Panhandle Eastern operations lie wholly within the Hugoton field.

[5540]

Q. What is another example? A. Several years ago I was working on the United Fuel Gas system in West Virginia, they produced and gathered gas at various points, from which points it was transmitted through a transmission line to Cobb Gasoline plant where it was then processed, and—

Q. (Interrupting) Was that—go ahead. A. And another case in West Virginia concerns the gasoline plant at Hastings owned by the Hope Natural Gas Company. Most of the gas processed at this plant came into the plant through Hope's transmission lines and those transmission lines gathered gas for a distance of some 50 to 75 miles from the plant and maybe farther.

Q. When you say they gather gas, do you mean they carry gas— A. (Interrupting) I mean they transported gas from various points, where it was gathered, to this plant and the plant was on the transmission system in that case.

Q. In other words— A. (Interrupting) There were, however, I think, some local gas around that plant that may have come in on gathering lines from properties around the plant there proper, but large quantities of the gas that was processed in that plant were delivered to that plant through the Hope's transmission system.

Q. What I want to get at and have the record clear on is

[5541]

that the gas was assembled in common point and gathering completed, as I understood your answer before transmission and that transmission carried over a distance of something like 75 to a hundred miles, is that right? A. 50 to a hundred miles, somewhere in that neighborhood, yes, sir.

Q. But the point I'm asking you is this, had gathering been completed before it was transmitted through that transmission line? A. Gathering had been completed at various points over the system before the gas entered this transmission system that carried the gas to the gasoline plant.

Q. I see. Do you have another example of a like situation on Hope's system? A. They had another situation of that kind in the case of their gasoline plant located at Schultz, which is over near Parkersburg, West Virginia. There practically all of the gas was processed at that plant was delivered to the plant through Hope's main transmission lines.

Q. What was the distance after gathering was completed before the gas entered the processing plant through the transmission lines? A. In that case some 40 to 50 miles, I would judge.

Q. Do you have any other examples? A. On the United Gas Pipe Line Company properties where I now have some men working, they operate a gasoline plant at

[5542]

Latex, Texas, where they process large quantities of gas. Most of this gas has been gathered and delivered through transmission system to the Latex plant.

Q. When you say gathered there you mean gathering has been completed before it enters the transmission? A. Yes, sir, that is what I mean. The transportation to this plant is of varying distances up to, I'd say, about 50 miles. Another instance of this nature existed several years ago when I worked on the Ohio Fuel Gas Company property, where they operated a gasoline plant at Crawford No. 1 station. That is located about 40 miles south of Columbus, Ohio. This processing plant—I'll say it this way, the gas that this processing plant processed was practically all brought to this plant through their main transmission lines.

Q. Where you have used processing in these various examples have you been referring to gasoline plants for the extraction of the heavier hydrocarbons? A. That is right.

Q. I believe you did state that at all of these plants or some of them, in any event, except the last one on the Ohio Fuel Gas Company's system, there was some gas produced locally which by various lines may have been brought into the processing plant, those various lines being field lines, is that right? A. There was no gas produced locally on the plant that I operated myself.

[5543]

Q. I see.

MR. SPARKS: I believe he so stated with regard to

some of the others, but I could be mistaken.

BY MR. McALLISTER:

Q. Pass over that one, then, and the Ohio Fuel and state which of them may have or do process some gas locally as well as the gas that is brought in through transmission lines? A. Those on the United Fuel and the Hope, I feel quite sure, had some, handled some, local gas, yes.

Q. Is there any of that character of gas on the two Panhandle examples that you gave us where the gas would be brought into the Liberal gasoline plant? A. Liberal plant handles the gas that comes in from the two main compressor stations I mentioned. It also handles some gas that comes in from a field, a section of the field, there southwest of the Town of Liberal that comes in direct from the field.

Q. Do you mean field lines? A. Yes, I think at a lower pressure, I'm sure at a lower pressure than the pressure at which these other lines deliver.

Q. Are the processing plants in the examples which you have been giving to us a part of such local gathering facilities? A. They are certainly not a part of the gathering facilities as I see it. Furthermore in these cases I have mentioned the major portion of the gas processed in these plants come through

[5544]

the transmission system before being processed.

Q. Have you examined Exhibits Nos. 45-A, 45-B, 45-C, 45-D, 45-E-1, 45-F-1, 45-G-1, and 45-H-1 in this docket? A. Those are flow diagram exhibits?

Q. That is right. A. I did examine them, yes, sir.

Q. From a consideration of those exhibits, being flow diagrams of the Sherman, Hansford, Sneed, Dumas, Gray, Eunice, Fullerton, Goldsmith and Crane plants operated by Phillips Petroleum Company, would you say that there is anything extraordinary or unusual about those plants as compared with the ordinary run of plants with which you are familiar? A. There was nothing I could see from those diagrams, no, sir.

Q. From your study and examination of those exhibits does it appear the operation of those plants constitutes a part of gathering?

* * *

THE WITNESS: No, they are definitely processing plants.

[5545]

I can't conceive of anyway they could be considered a part of gathering. In fact, I have been in the business for 30 years and I never heard of classifying processing plants with gathering systems until Saturday here when I heard it in this court room.

BY MR. McALLISTER:

Q. It has been testified in this case that gathering of natural gas is not completed until the gas gathered has been disposed of, for example, sold and delivered to another company, flared or consumed in some device by the gatherer or the like. Do you agree with that? A. I certainly do not. Gathering, processing and transmission—

Q. (Interrupting) And what, transportation? A. Trans-

portation, through the transmission line, maybe completed before the gas is disposed of.

Q. Then you would not agree that the flaring of gas out of a gasoline plant is a part of gathering? A. No. As I said before it is a part of the operation of that gasoline plant if they do that, and I said that gasoline or the processing plant was no part of gathering.

* * *

[5546]

HARRY P. STEVENS

was called as a witness, and being first duly sworn, was examined and testified as follows:

[5547]

Direct Examination by Mr. McAllister

Q. What is your full name, Mr. Stevens. A. My name is Harry F. Stevens.

Q. Where do you reside? A. Washington, D. C.

Q. I believe you are employed by the Federal Power Commission? A. Yes, sir.

Q. In what capacity? A. Natural Gas Engineer.

* * *

[5550]

Q. Is a natural gas plant and a natural gas processing plant the same thing, Mr. Stevens? A. Not necessarily. A natural gasoline plant for the extraction of heavier hydrocarbons may also have installations for sulphur removal

and dehydration. In that case they would be substantially the same. However, different plants may be maintained for each purpose, namely, to extract heavy hydrocarbon, to remove sulphur or for dehydration purposes.

Q. Is a natural gasoline plant or a natural gas processing plant in any way a part of the gathering of natural gas?

A. No.

MR. SPARKS: I object again to this witness' testimony in expressing an opinion—I assume it is conceded that is what he is expressing—with regard to what constitutes a gathering of natural gas for the reason that I don't believe he has been shown to be qualified to have an opinion as to the use and meaning of that term as it is used in the industry.

* * *

[5552]

BY MR. SPARKS:

Q. Mr. Stevens, are you also reading your answers?

A. Yes, sir.

MR. McALLISTER: I'll give you a copy of it as soon as we have finished, Mr. Sparks, if it will be of any assistance to you.

MR. SPARKS: I'll get my copy from the official reporter.

* * *

[5560]

PRESIDING EXAMINER: Strike out "and an examination

[5561]

and study of the exhibits", from there on.

BY MR. McALLISTER:

Q. Do Exhibits Nos. 12-A, 13-A and 45-A support you in the conclusions which you have expressed, Mr. Stevens?

A. Yes, I think they do.

Q. Would you say that gathering is an adjunct to processing or transmission? A. Yes, I would since the only reason for gathering natural gas is to assemble the gas for processing and transportation.

Q. Where the gas is assembled merely for processing through a gasoline plant, what would you say there? A. When that is the case, the gathering of natural gas is to assemble such gas for the recovery of natural gasoline as a prime objective and other recoverable hydrocarbons, and if you say, for instance, that the substantial part of the residue gas is flared and doesn't go to a pipe line, the gathering may be said to be an adjunct to manufacture, since the gathering is for the assembly of a raw material which by manufacture or process is converted into natural gasoline, propane, butane or other marketable products. In such a case, the gathering system is but a plant facility.

Q. It has been testified in this case that the gathering of natural gas does not end until the gas reaches

[5562]

the point of disposal, that is, where the so-called gatherer sells and delivers the gas to another person, flares or vents the gas or consumes the gas under boilers or injects gas returned to leases or the so-called gatherer into gas or oil-

producing formations at the bottom of an injection well, where such disposal occurs after processing in a gasoline plant. Do you agree with such a concept? A. I cannot possibly agree with such an idea. Gathering ends when natural gas has been assembled at some common point of flow, point of common flow, in a pipe line designed to carry that gas to a processing plant or to some connecting transmission line. Gathering cannot possibly extend beyond the processing plant. It may end short of the processing plant. That determination depends upon a study and consideration of the facts in such instances.

Q. Is the character of the natural gas altered in a gasoline processing plant? A. The residue from a gasoline plant or processing plant is essentially the same. The proportion of the constituent elements is altered. If the gas passes through a desulphurizer, the objectionable sulphur is removed. Chemical elements making up the heavier carbons are reduced as the natural gas passes through the absorbers in the gasoline plant. Moisture and water vapors are removed by dehydration. However, natural gas processed through such plants, which

[5563]

gas is destined for pipe line transportation to domestic markets and industrial use has a btu content on the order of 975 to 1,000 Btu's per cubic foot. The constituent elements remain. The proportion of some of the elements to the total has, of course, been altered.

Q. But it still remains natural gas, is that right?
A. Yes, sir.

* * *

[5567]

MELWOOD W. VAN SCOYOC

was called as a witness, and after being first duly sworn, was examined and testified as follows:

Direct Examination by Mr. McAllister

Q. What is your full name, Mr. Van Scoyoc? A. Melwood W. Van Scoyoc.

Q. Where do you reside? A. Alexandria, Virginia.

Q. I believe you are employed by the Federal Power Commission? A. I am.

* * *

[5570]

About six months after going with the Federal Power Commission I was placed in charge of that work as Chief of the Division of Original Costs, and my activities in that work continued until I went on military leave with the army in July 1942. I returned to service with the Commission in September of 1945 as Assistant Chief of the Bureau of Accounts, Finance and Rates.

In that position I have supervisory responsibility covering the four divisions of the bureau. The Division of Accounts, the Division of Rates, the Division of Finance and Statistics and the Division of Gas Certificate. I have been actively associated with the activities of those particular divisions and their duties and responsibilities since that time.

Q. Are you familiar with the rules and regulations of the Federal Power Commission insofar as they relate to

[5571]

natural gas companies — A. (Interrupting): Yes, sir.

Q. (Interrupting): —as such term is defined in the Natural Gas Act? A. Yes, I am.

Q. How many of the companies which report to the Federal Power Commission as natural gas companies are engaged in the production of natural gas? A. There are about sixty such companies.

Q. How many of the companies are classified as A and B companies? A. Fifty-four.

* * *

[5583]

Q. I think you just stated, Mr. Van Scoyoc, in answer to a question as to how many companies report to the Federal Power Commission—put it this way, how many of the companies which report to the Federal Power Commission are natural gas companies and are engaged in the production of natural gas and you answered, as I recall it, 60 such companies. Now, how many of those companies fall in the class of reporting companies classified under the uniform system of accounts as Class A and class B companies and what is that classification?

MR. SPARKS: May I have a continuing objection to this line of testimony.

PRESIDING EXAMINER: Yes, you have a continuing objection.

THE WITNESS: There are 54.

MR. SPARKS: I didn't hear the answer.

THE WITNESS: There are 54 such companies and that

classification covers companies whose gross operating revenues exceed \$250,000 per annum.

BY MR. McALLISTER:

Q. How many producing gas wells are owned by such companies, the 54 companies? A. There are 30,162 producing gas wells.

Q. And how many oil wells?

[5584]

A. 622.

Q. In addition to the 60 companies which you mentioned, are there other companies reporting to the Federal Power Commission as natural gas companies which do not produce gas but do carry on field operations and in some cases process natural gas? A. Yes. There are eight such companies who gather and process gas but do not have producing wells of their own.

Q. As to those 54 natural gas companies in the classification that you have designated at "A" and "B" companies, that you have mentioned as owning producing wells, do those companies also gather and process natural gas? A. Yes. Most of those companies engage in those operations.

Q. Upon what do you base your statement that those companies are engaged in processing operations? A. I base my statement on the reports which are made to the Commission by such companies and I included in the word process the extraction of liquid hydrocarbons and the removal of sulphur, water and other impurities.

Q. Are a substantial number of those companies which

you mentioned performing such activities in the midcontinent and southwest section or sections of the United States? A. Yes, they are.

* * *

[5585]

Q. What proportion of the 54 companies operating in the southwest and midcontinent area are engaged in the activities of producing, gathering and processing of natural gas within the states of Arkansas, Kansas, Mississippi, Louisiana, New Mexico, Oklahoma and Texas? A. About one third of the 54 companies, 17 of them to be exact.

Q. Are any of the other "8" companies, I mean that is the difference between the 60 who are natural gas companies and the 54 which are classified "A" and "B" companies, are any of the other eight companies engaged in gathering and processing activities and reporting to the Federal Power Commission as natural gas companies conducting their operations in the seven states you have mentioned? A. Yes, there are six of those companies in that area.

Q. Have you been in attendance in this hearing room during the course of the proceedings in this docket? A. Yes, I have, except for a period of three days.

Q. Were you present when the witnesses Giles, Thompson, Murray, Cavett, Davis, Baumel, Spurrier, Capshaw and Jones testified in this proceeding? A. Yes, I was present.

Q. Have you examined the various exhibits placed in evidence in this proceeding by counsel for interveners and respondent which related to duties, functions, rules, regulations

[5586]

and orders of the Texas Railroad Commission, the Oklahoma Corporation Commission and the New Mexico Oil Conservation Commission? A. Yes, I have.

Q. With respect to the production and gathering activities of the natural gas companies which you mentioned as reporting to the Federal Power Commission, has the Federal Power Commission ever issued any rules, regulations or orders which relate to the duties or functions of the three state agencies described by the above enumerated witnesses?

* * *

Q. (Interrupting) And or as indicated by the exhibits to which I have referred?

* * *

[5587]

A. No, the Commission has never issued any such rules, regulations or orders which relate to the production and gathering activities of natural gas companies reporting to the Commission.

BY MR. McALLISTER:

Q. Or any of them? A. Or any of them.

Q. And you omitted the word processing in your answer. Did you intend to include that? The question specifically asked you regarding processing. A. Well to answer your question on processing, there may have been a case where a natural gas company applied for a certificate to build a new pipe line and they may have included the processing plant as a facility and requested a certificate

thereon. It is possible that the Commission in entering an order granting the certificate may have granted it in the terms of the facilities applied for rather than specifying certain lines or facilities.

* * *

[5611]

Q. The other day during the questioning of Mr. R. R. Spurrier, a member of the Oil Conservation Commission of the State of New Mexico, the question arose as to whether the Southern Union Gas Company was a natural gas company reporting to the Federal Power Commission. Do you know of your own

[5612]

knowledge whether that company files any reports or otherwise reports to the Federal Power Commission as a natural gas company? A. It does so report to the Federal Power Commission.

Q. Do its reports to the Commission show it's engaged in the production, gathering and processing of natural gas in the states of Texas and New Mexico? A. The reports so show.

Q. Has the Federal Power Commission in the regulation of the natural gas companies subject to its jurisdiction ever fixed the amount to be paid by a natural gas company to any royalty owner by such natural gas company? A. No, sir, the Commission has never fixed the amount of the royalty payment by a natural gas company which is a producer to a royalty owner.

[5613]

Q. Has the amount paid been recognized as a cost in all matters where costs are involved and under consideration? A. Yes, sir.

Q. Are natural gas companies under any circumstances required to obtain certificates of public convenience and necessity for the construction or operation of gathering lines or facilities? A. No, sir, they are not. In fact, in one case the Commission specifically disclaimed jurisdiction where a certificate had been applied for.

Q. What was that case? A. That was the case of Arkansas-Louisiana Gas Company, and is cited in 7FPC766.

Q. When you say 7FPC766, you are there referring to the reports of the Federal Power Commission? A. I am.

* * *

[5614]

Cross-Examination by Mr. Sparks

Q. Mr. Stockwell, what is the purpose of gathering?
A. To assemble the gas.

MR. TORKELSON: Mr. Examiner, may we request that the witness speak louder so we can hear him over here?

PRESIDING EXAMINER: Yes, will you speak a little louder, please?

THE WITNESS: The purpose of gathering is to assemble the gas to a common point and then deliver it into a transmission system or deliver it to a point of disposal.

BY MR. SPARKS:

[5615]

Q. Let's assume—

MR. McALLISTER (interrupting): Will you speak up a little louder so the witness can get all the question, Mr. Sparks?

MR. SPARKS: I'll try to, Mr. McAllister.

MR. McALLISTER: I'll appreciate it if you would. If I can't hear it plainly, I'll have to ask that it be read and I want to avoid that if I can, Mr. Examiner, but it is for the benefit of the witness.

PRESIDING EXAMINER: Yes.

BY MR. SPARKS:

Q. Now, let's assume that wherever gathering ends under your concept of gathering the gatherer at that point delivers the gas to a transmission line, however you define transmission line. Do you understand the question? I mean the statement. Now, the question is what was the purpose of that gathering? A. You say what was the purpose of that gathering?

Q. Yes. A. On your assumption that it is gathered and brought to a point where it is delivered into transmission lines?

Q. No. The assumption is that the gatherer gathers it to the point, whatever that point may be, where you say that gathering ends, and at that point sells it and delivers it to a transmission line, and the question is what was the

[5616]

purpose of that gathering? A. On that assumption the only purpose I can see is to make the delivery.

* * *

[5623]

Q. That is right, you may presume if you wish there is no market. My question to you is what is the purpose of that gathering? A. If you did that, which would be rather unusual in the experience I have seen in the industry, I can assume no purpose you'd have in gathering that gas to bring it to that point to flare it under those conditions unless you wanted to burn it all through one flare instead of a flare at each well.

Q. Well, you may assume that is what you want to do? A. That would be your purpose to burn the gas so you could dispose of it through one flare instead of several flares.

Q. When were you in Oklahoma? A. Do you mean—

Q. (Interrupting) What year? A. When was I there?

Q. Yes.

[5624]

A. From 1921 to 1931.

Q. Had the Oklahoma City field been discovered at that time? A. Had what?

Q. Had the Oklahoma City field been discovered at that time? A. Yes, sir, I believe it had. I don't remember. Yes, I believe it was.

Q. Did you live in Oklahoma City? A. Yes, sir.

Q. Don't you know that there were millions of cubic feet of gas flared in exactly the manner in which we are speaking of out of that Oklahoma City field? A. I know there has been considerable gas flared there and part of it may have been assembled through gathering lines and

flared through one flare and part of it has been flared through single flares from the one well, I know that, too.

Q. But you don't know whether it had been gathered from several wells and flared through a single flare? A. I don't know of any that has been gathered through a number of lines and flared through a single flare, but that undoubtedly has been done. It has been done on gasoline plants where they didn't have a market for it. That is gathering it and bringing it to a processing plant and after processing they have flared the residue down there in some cases. That would be

[5625]

in line with your supposition, excepting in that case they have a processing plant and in the case you mentioned they didn't have a processing plant.

Q. In the instance you mentioned, what would be the purpose of the gathering there? A. The purpose of the gathering there would be strictly an economic proposition to get what gas they could gathered to deliver it to a processing plant and the purpose of gathering to bring it to that processing plant would be to process it and get what money they could out of the products they could take out of it through a processing plant before they flared it if they had no market for the residue.

* * *

[5649]

Q. Mr. Stockwell, I hand you exhibit No. 188. Do you see on that exhibit some small round circles? A. Yes, sir.

[5636]

MR. SPARKS (interrupting): I asked him the question whether or not the gas through those four lines had been collected together in a single mass of gas prior to the time when it entered the common header at the intake of the engines. That was the question, and I want it answered.

PRESIDING EXAMINER: Speaking now purely of a physical situation, do you understand the question?

THE WITNESS: Answering his question on that basis only and not as a measure of where the gathering ends, it is very evident to anybody that all the gas never gets into that plant until all the gas gets in from all those lines into one spot.

BY MR. SPARKS:

Q. Then under your concept of gathering, gathering ends before the purpose of the gathering is accomplished?

A. No, sir.

Assume that those are gas wells? A. Assume that they are what?

Q. Gas wells. A. Gas wells.

Q. And you also see some solid lines, do you not?

A. Dotted heavy lines, yes, sir.

Q. No, I say you also see some solid lines? A. Solid lines, yes, sir.

Q. And by the side of which there are some numerals?

A. That is right.

[5650]

Q. For example, one of them has the numeral 4 with two dots by the side of it, meaning four inch. That is the common method of designation for four inch, is it not?

A. That is correct.

Q. And you also see a heavy dotted line, do you not?

A. A heavy broken line, yes, sir.

Q. And the heavy broken line is marked transmission line? A. It is.

Q. Now assume that company "A" owns all of the wells on Exhibit 188 that are located on the right-hand side of the longer line which runs generally from the bottom of the exhibit towards the top of the exhibit. A. The line you have marked 6, 8 and 10 inch?

Q. Yes, sir. A. Yes, sir.

Q. And assume that other producers own the wells which are located on the left-hand side of that line and that company "A" has a contract to purchase the gas produced from those wells from those producers, the purchase to be made and the delivery to be made to company

"A" at the wells. A. Pardon me for interrupting, but the wells on the left-hand side are purchase gas wells?

Q. That is right, other producers. A. And the wells on the right-hand side are—

Q. (Interrupting) The wells on the left-hand side are

[5651]

wells from which gas is being purchased by company "A" and the wells on the right-hand side are wells on leases that are owned by company "A" itself. A. And your right and left-hand refers to you standing on the 6, 8 and 10 inch and facing the transmission line?

Q. Right. Assuming company "A" lay the lines which are marked on this diagram as 4-inch, 6-inch, 8-inch and 10-inch and takes gas from each of the wells and sells and delivers such gas to company "B", which owns and operates the transmission line, the heavy broken line on the diagram, and assume that the point of delivery of the gas into the transmission line of Company "B" by company "A" is at the point shown on the diagram where the 10-inch line joins or connects with the transmission line? A. In other words, there is a sale measure station up there at that point?

Q. And assume that there is a metering station on the 10-inch line just prior to the delivery or connection of the 10-inch line into the transmission line, and that all of that solid lines are owned and operated by company "A". Under your concept of gathering where would gathering end under the operations which have been assumed and as related to the diagram, Exhibit 188? A. The diagram 188

shows no distances on the gathering system thereon. From this diagram and not knowing anything about

[5652]

the layout other than appears on this diagram I would say gathering ends at the transmission system just the same as I said in my direct testimony.

Q. I take it by that that you mean at the point where the delivery is made into the various lines— A. (Interrupting) Where company "A" delivers to company "B", which, you stated, was in the immediate vicinity of the transmission line or the point of connection of the company "A's" lines with company "B's" lines.

Q. Would you place an "X" on Exhibit 188 at that point so there won't be any question in the record as to the point.

MR. McALLISTER: How are we going to show that that was put on there by the witness?

MR. SPARKS: Because the testimony will reflect it.

MR. McALLISTER: Mr. Examiner, I object to any change being made on the exhibit because that is in the record and I presume we are going to get copies of it.

THE WITNESS: I'll take it off. I haven't put anything on there yet.

PRESIDING EXAMINER: That is the difficulty we ran into, of course, in connection with having the witness mark lines on the other maps. I think it does present something of a problem.

MR. SPARKS: It is a different proposition, though Mr. Examiner, where the exhibit is the exhibit of the

party who is requesting that the point be marked on the exhibit and also a

[5653]

different proposition when none of the duplicates have been made. These will have to be made by photostat so anything put on there will undoubtedly appear on the photostat.

MR. McALLISTER: That doesn't help the problem at all for the simple reason the exhibit has been marked and as marked it is an entity and the maps we had before there were errors on them and it was merely trying to work out some arrangement whereby the maps that respondent had submitted could be corrected, and we did it in what we thought was the reasonable way, but we did run into difficulty.

This is an entirely different situation. We have an exhibit here and to have the witness directed to put marks on there hither and yon, it can be very well definitely stated where the point is.

MR. SPARKS: I'm not making any point of it. As a matter of fact, I can see from the marks that the witness did make on the exhibit that it might serve to confuse rather than clarify.

MR. McALLISTER: It wasn't what you expected?

MR. SPARKS: It wasn't what I expected.

PRESIDING EXAMINER: All right, let's proceed.

MR. SPARKS: Because I want the matter to be clear in the transcript and in order that it will be absolutely clear, I take it from the witness's testimony that the gathering ends at the point where the solid line connects into

the dashed line marked "transmission line", which is the point at which we have assumed

[5654]

the delivery was made to company "B", the transmission company.

BY MR. SPARKS:

Q. That is what you said, was it not? A. I have stated that from this chart without any measurements on it or anything, that is the best place I could conclude that it ends. Now, if the distance might be considerable between the last well entering into that gathering system and the company "B's" transmission line there might be a portion of that line that was actually company "A's" transmission line, part of the solid line there. I don't know what your distances are and your diagram doesn't show.

Q. Assume that the gas from the last well as shown on the diagram goes into that line at a point which was a mile from the point at which the solid line connects with the transmission line but still within the field of production. Would not that mile of line still be a part of company "A's" gathering system? A. It might or might not depending upon the manner company "A" decided to designate it. The fact that the line is running through a producing field does not determine that it is a gathering line. If there is a mile in there that gathering has not been completed before it traverses that mile, and a mile would hardly be a distance that anybody would be too particular about whether they called it a gathering line or a transmission line, but the fact that it is in the producing field

makes no difference, it has no bearing upon what that line is. We have lots of

[5655]

transmission lines in producing fields, transmission lines.

Q. What is the distance which determines whether it is a gathering line or a transmission line from the point where the gas enters the gathering system from the last well and the point where the delivery is made to the transmission line? A. When your gathering function is completed on a certain system and there is no more additions made to that streamlined flow that is on its way either to the inlet side of a gasoline plant or to a transmission line, I think gathering has been completed. Of course, I realize, as well as you, that at sometime in the future another well may be drilled along that interval at which time a part of the line that would have previously been termed transmission would naturally convert to part of the gathering system.

Q. I believe you stated that the function of the gathering where the gas was delivered to a transmission line, as in this example, was for delivery of the gas for transmission, did you not? A. I didn't understand all that question. I think I did but would you read it please.

(The question was read by the reporter.)

MR. McALLISTER: I don't understand the witness related that answer or any such answer to this problem.

THE WITNESS: I did—pardon me.

MR. McALLISTER: Go ahead.

THE WITNESS: I said that the function of gathering was to

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deliver the gas to a point where it could be transported through a transmission line to ultimate point of delivery, but I didn't say that the mere fact that you have named this one line a transmission line and you have drawn lines to it, that no part of the line that you drew to it couldn't be a transmission line to which that gathering system was carrying gas.

BY MR. SPARKS:

Q. I understand that, but you stated that if the distance between the point where the last well came into the 10-inch line and the point of delivery at the transmission line was a mile that it wouldn't make much difference which way it was classified? A. I think it would be rather immaterial whether you called it transmission or gathering line, that little piece, while theoretically and actually all gathering has been completed at the time the 4-inch line from that last well nearest the pipe line enters that line, but I think there would be a question about calling the rest of that line from that 4-inch connection to the 10-inch there, from that point up to the transmission line, a gathering system if it was 10 miles or something like that in there between that point. I wouldn't be inclined to call all that line a gathering line.

Q. In making your last statement, Mr. Stockwell, are you testifying as to how you would classify it or as to the concept of gathering as it is used in the industry? A. I'm talking about the concept of gathering in the

[5657]

industry that I understand from various operators in the industry. After all, there has to be some practical common sense used in the determination of these matters. It can't all be done by some rule down to the last foot.

Q. Then it is largely a matter of opinion, is it not, within certain limits, of course? A. I would say that the individual operators opinion has a lot to do with just when he would call that interval between the last 4-inch connection and this here transmission line, when he would call it a transmission line and how long he would leave it a field line, yes, sir, I mean a gathering line.

MR. SPARKS: We request that a yellow sheet containing a number of lines and some figures be marked for identification as Exhibit No. 189.

PRESIDING EXAMINER: It will be so marked.

(THE DOCUMENT ABOVE REFERRED TO WAS MARKED AS EXHIBIT NO. 189 FOR IDENTIFICATION.)

[5658]

BY MR. SPARKS:

Q. I hand you now Exhibit 189 and ask you to assume the same facts and situation which was assumed with reference to Exhibit 188, but in order that it will be easy, just assume that the distance between the point at which the last gas is delivered into the solid line, the 10-inch line, and the connection to the transmission line is, oh, say, a couple of hundred yards. A. That is, between the 10-inch residue line from the processing plant—

Q. (Interrupting.) No, the point at which the last gas is delivered into the 10-inch line from a well through a line which is marked "4-inch" and the point at which there is an intersection of a 10-inch line with the transmission line. A. Yes, sir.

Q. In other words, that is the distance between those two points? A. Two hundred feet?

Q. Well, make it two hundred feet. That is good enough. Two hundred yards is what I said. It doesn't make any difference, I don't believe. A. O. K.

Q. In Exhibit 189 there is a block valve in the 10-inch line which is marked with "X" and which lies between

[5659]

the point where the gas from the last well enters the 10-inch line through a 4-inch line and the transmission line. You observe that "X"? A. I do.

Q. That block valve is closed, and there is a take-off upstream from the block valve carrying all the gas which is taken into the 10-inch line a distance of another two hundred feet at right angles to the 10-inch line to a circle, to a processing plant, which is marked on your diagram as a circle. Do you see that? A. I see that.

Q. And that gas has come through the processing plant which we will assume is an absorption type processing plant, and the residue gas from the absorbers and from the overhead vapors of the fractionator are taken through the 10-inch line as shown on the diagram back to the 10-inch line which intersects with the transmission line at a point which is downstream from the block valve.

Anyway the take-off to the plant after the last gas is delivered into the 10-inch line and before it gets to the block valve, which, of course, blocks the gas off at this point.

A. Where is that pop valve you are talking about?

Q. The block valve. A. Oh, the block gate, yes.

[5660]

Q. And that block gate is closed, and my question to you is where the gathering ends when the gas from these wells is taken into the processing plant and the heavier hydrocarbons extracted and the residue gas from the overhead vapors from the fractionator deliver to the transmission line at the same point at which delivery was made on Exhibit 188.

MR. McALLISTER: Mr. Examiner, may we have that question read, please?

PRESIDING EXAMINER: Read the question.

(Question read by the reporter.)

[5661]

MR. McALLISTER: In this question related to Exhibit 189 it is referred to as a processing plant and another place as an absorber. We can eliminate that if we knew where the fence line was around that plant. If the circle is the entire plant in the enclosure that is one thing, and if that is the absorber, that is quite another thing, but as it stands now, it is impossible even with the question clear to understand what this entire matter involves. It is a very rough sketch of the presumed problem and the plant fence is not shown. They say 200 feet over there

and it is 200 feet from the transmission line down to the last 4-inch line that is coming in, so that if there is 200 feet in relation to that it looks like it is a segment of the inner works of the gasoline plant, maybe the absorber, I don't know.

I object to the question and the diagram when a question is related to the diagram in this fashion, unless it is made perfectly clear.

PRESIDING EXAMINER: The objection is overruled. Do you understand the question, Mr. Stockwell?

THE WITNESS: I think I can state it and see if I do understand it.

PRESIDING EXAMINER: All right.

THE WITNESS: Did I understand in the first place, Mr. Sparks, this is the same four purchase wells and two producer wells we had on the other diagram?

BY MR. SPARKS:

[5662]

Q. That is correct. A. And the gas is gathered through these lines and brought up to a point near this block gate?

Q. That is right. A. Where it is delivered into the processing plant through a line shown here to the right?

Q. That is correct. A. And passes through the processing plant and is returned to the 10-inch line on the downstream side of the block gate and delivered into the transmission line.

Q. That is, the residue gas. A. The residue gas, that is what I mean.

Q. That is correct. A. And your question is where does

gathering end in this instance?

Q. That is correct. A. In answering this question I am assuming your circle represents the outside limits of a regular processing plant that you have got there.

Q. Very well, go ahead.

BY MR. McALLISTER:

Q. Do you mean fence line? A. What? Fence line, yes, including all—in that case, as I have stated, in my previous testimony, gathering ends at that fence line or at the outside edge of the processing plant on the

[5663]

inlet side of that processing plant.

BY MR. SPARKS:

Q. Very well, now, let's crack that block valve and let half the gas go directly into the transmission line without going through the processing plant and half of the gas go through the processing plant as in the previous question. My question to you then is when does gathering end as to the two lots of gas? A. Well, you have a situation in that connection that is not usually found, not very often found. And so far as I can see since the processing plant is no part of a gathering system, your gathering system there would be ended insofar as the gas passing to the processing plant at the inlet side of the processing plant, but the gas going straight through would have to be considered as gathering system, I suppose, until you got to the transmission line. That is a very unusual and extraordinary case. If your are going to put a processing plant there, I don't know why you would put one there unless

you intended to process the gas that was available for processing.

* * *

[5670]

HARRY F. STEVENS

resumed the stand, and having been previously duly sworn, was examined and testified further as follows:

[5671]

Cross Examination by Mr. Sparks

Q. I believe you stated, Mr. Stevens, yesterday, that after you graduated from the Colorado School of Mines with a degree of Petroleum Engineer in 1923, your first employment was with the Empire Company in Bartlesville, is that right? A. Yes.

Q. What were your duties in that employment?

I'll make that more specific. As I understood your testimony you said you were transferred in 1924 to the Henry L. Doherty Company, so I'm speaking of the period when you were working for the Empire Company, which was in 1923. A. Yes, sir. I think you refer to that period which might be generally described as during the junior engineer's course, it is generally referred to.

Q. That is a course that was given by the company to young engineers when they are employed, is that right? A. As I recall at that time every young engineer came into the employ of the company went through that course if

you were an engineer, and by "course", perhaps the term is a little bit loose. It consisted of assignments to various types of experience and

[5672]

it is a course in the sense that you gained some instruction and you also worked, so that was the character, the intent and character of the assignment.

Q. How long did that last, that course? A. I believe the course was two years, and whether one continued the full two years of the course depended on whether during this schedule of assignments he found something that he thought he would like to continue work in or someone requested his services in a particular activity and he accepted a permanent assignment to that activity, whether it be production or what-not.

Q. Of what did the course consist insofar as you took it? A. In my case, my first assignment, and I think I can keep these in chronological order, was the keeping of time and costs on a natural gas pipe line construction job in Kansas.

Q. In Kansas? A. Yes, sir.

Q. Did that continue up to the time you went with the Doherty Company? A. No, sir.

Q. Well, then, go ahead. What was your next assignment. A. The next one was the construction of an oil pipe

[5673]

line job of which I had charge. It was an assignment that covered, I think, about three months, although I'm sorry

but I don't think, I can be specific as to these intervals.

Q. It has been a long time ago. A. Yes, sir.

Q. And do you recollect where part of that was, where that line construction was? A. It terminated at the Cushing Refinery.

BY MR. McALLISTER:

Q. Where is that? A. Oklahoma.

BY MR. SPARKS:

Q. After that assignment do you recall your next assignment? A. After that I was assigned to the refinery division which involved two phases of work, for a short time I was in the Tulsa office of the refinery division, and as I recall there I was studying whatever literature was available in the library, and, as I recall, there was some operating statistics. That phase of the assignment was relatively short, and I then went to the Cushing Refinery where I did some work in experimental gasoline treating. At the conclusion—

Q. (Interrupting): Is that an oil refinery you are

[5674]

speaking of, at Tulsa? A. Yes, sir, at Cushing.

Q. Cushing, yes. A. The next one following that, the next assignment following that, was an oil production at Oil Hill, Kansas. It was at that time and during that assignment that my assignment was requested to Henry L. Doherty and Company at New York, and I left on that assignment.

Q. Were you employed in New York on that assignment? I mean when you were with the Doherty Company.

Did you live in New York? A. Yes, sir.

MR. McALLISTER: Might I ask a question?

BY MR. SPARKS:

Q. I believe according to your testimony you were with them from 1924 to 1927, working principally on statistical analyses? A. That was my principal activity, yes, sir.

[5675]

Q. I believe you stated then that in 1928 you were temporarily assigned to the gas division of the Empire Company, is that right? A. I think I stated there another intervening activity. I think I am sure I did. My first activity on being reassigned to the Midcontinent area was a search for oil leases which were to be later repressured.

Q. That is stated in your statement, and I related it to your employment with the Doherty Company, but that was after— A. (Interrupting) No, sir, it isn't. That was back with the Empire Companies again.

Q. You were engaged in searching for oil leases that might be purchased for repressuring operation, as I understand? A. Yes, sir.

Q. How long did that assignment continue? A. I don't know whether I can tell you that or not. I don't believe I can tell you that except it was in the order of a few months.

Q. That is sufficient. At any rate, at the terminous of that assignment you continued with the Empire Company, and it is not material which one, on a temporary basis for the purpose of testing, I believe you stated, some 600 wells of the Missouri-Kansas Pipe Line Company? A. I think that is a little bit in error. I was not continued on a temporary basis for the Empire Companies. I was

[5676]

requested for a temporary assignment for the testing of these wells.

Q. What type of tests did you perform on the wells?

A. These were ordinary Pitot Tube tests or orifice well tester tests of gas wells. It is obvious from this that the wells were not large wells.

Q. And I believe you stated that your next assignment concerned the investigation, experiment and development of underground storage in depleted gas fields and gas storage by other means, is that correct? A. Yes, sir.

Q. And you continued in that work until 1936, is that right? A. Yes, sir. With the addition of minor other work, which to which, that was the major.

Q. Then from 1936 until 1939 you were employed by Stanolind Oil and Gas Company? A. Yes, sir.

Q. And I believe that you stated that your work with Stanolind had to do primarily with determining the economics of development programs on oil leases, is that right? A. That was only one phase of it. I didn't intend to restrict the description of experience to economic analysis of the work I did. As a matter of fact, it was engineering work and we were always required to economically analyze the work of the work-over, in case it were a work-over, of the development

[5677]

program, if that were it, and of the pressure maintenance program, if that were it. It was a component part of all engineering work done in the production department of

Stanolind at that time, at least, to consider the economic aspects of the work, but the work in a major sense was engineering, which as again as characteristic of Stanolind involved geological support and investigation.

Q. The various matters that you worked on in your employment with Stanolind were related primarily to the advising of the company with reference to problems affected by geology? A. No, sir.. The geology and the economics were aspects or related aspects to engineering as the major activity and component in all such work.

Q. None of your work with Stanolind related to the operation of a gasoline plant, did it? A. No, sir, except in those cases where pressure maintenance was involved, and then only to the extent that it applied to the engineering aspects, that is to say, that does exclude any consideration of the operation as such of such plants.

Q. In other words, it was only to the extent that the operation of a gasoline plant and the revenues from it might affect the economics of contemplated repressuring projects that you were concerned? A. That is right.

Q. I believe you stated that you were employed by the Federal Power Commission in 1939 and have been so employed with

[5678]

the exception of a period of four years when you were in service in the navy? A. Yes, sir.

Q. I believe you also stated that you were in the gas certificate division, is that right? A. Yes, sir.

Q. What has been the character of your work with the

Federal Power Commission since 1939? A. The character of the work has been the estimation of natural gas reserves, the collection of field and basic data relative thereto, the construction of exhibits and testimony thereon in connection with said reserves, the construction and presentation of deliverability exhibits.

Q. By deliverability, what do you mean there? A. The ability of gas wells to deliver gas. That aspect, of course, also includes the collection of basic data naturally. I think that can be implied in any of this. That brings us more or less up to the period of the war, after which for, I guess, about two years my work related to investigation of a great variety and types of exhibits presented before the Commission in dockets requesting certificate of public convenience and necessity for natural gas pipe lines.

Q. By that do you mean that you for the Commission analyzed exhibits that had been offered in connection with applications for certificates of public convenience and necessity,

[5679]

is that what you mean? A. Yes, sir. These exhibits varying in character from market exhibits to and including engineering exhibits of various kinds, pipe line design, operation.

Q. Does that bring it pretty well up to date? A. No, sir. I was about to say gas reserves and deliverability and that is true although it is true for a lesser extent than for the period which I am now about to mention, and that does bring us up to the current period which has covered the last two or three years, in which reserves and delivera-

bility have been the major, my major, activities, and the reason for that is organization of natural gas resources section for that purpose.

Q. Mr. Stevens, have you ever operated a gasoline plant? A. No, sir.

Q. Have you ever operated a gathering system? A. Well, I hesitate in an affirmative answer or a negative answer to your question because in the development of natural gas storage projects, we had in three instances of fields, that is, and several subinstances regarding those fields where gas was experimentally injected into the ground and was produced therefrom in the same manner as if they were normal producing fields, in which activities and activities involved in that testing and later in the operation of those storages when more completely repressured we have in those instances the exact duplication of the operation of a normal gas field, and in that

[5680]

operation there was certainly involved facilities which are referred to here as gathering system.

Q. Who were you working for at that time? A. Cities Service Gas Company.

Q. Did you have actual supervision over those activities? A. During those periods of test I did.

Q. You had supervision during the testing period? A. That is right, yes. That is to say, I don't wish to reflect any undue conveyance of authority in the operation of the Cities Service system, we selected the time when we wanted to do this work and did so in correlation with

the pressure dispatching, but during that period that part of the system was subject to our plans and activities of testing. I do not wish to go beyond that.

Q. Did you ever design or supervise the construction of a gasoline plant, processing plant? A. No, sir, except in the limited sense that one does so during a course of petroleum engineering, not for the construction of such a plant in actuality in any given field.

Q. Have you ever had any experience in the purchase or sale of gas at the wells? A. Do I understand by your question that is have I made contract with producers?

Q. The purchase or sale of gas. A. No, sir, I have not, but I have examined hundreds of

[5681]

them in connection with my duties at the Commission.

Q. Have you ever made any contracts for the purchase or sale of residue gas from a gasoline plant? A. No, sir, the same answer applies.

Q. During the course of your experience have you ever for any concern for whom you have worked negotiated the purchase or sale of a gasoline plant? A. No, sir.

MR. McALLISTER: May I have that question read, please, the sale of a plant?

PRESIDING EXAMINER: Read the question, please.

(The question was read by the reporter.)

MR. McALLISTER: Mr. Examiner, I don't know if that is clear. Does that include the gathering system under Mr. Bunn's theory? I think the witness is entitled to know what he means by a gasoline plant under the theories that

have been advanced here until it is defined or the witness is permitted to define what he understands by gasoline plant.

PRESIDING EXAMINER: Well, he can do that.

THE WITNESS: Well, I understand a gasoline plant as that group of facilities within the compound which is a compound closely associated geographically and physically which is designed and erected and operated for the removal of gasoline.

BY MR. SPARKS:

Q. As you have defined it, go ahead and answer the

[5682]

question. A. I have not. In other words, the answer is no to your question.

[5683]

Q. Have you ever been inside a gasoline plant which is processing casing-head gas? A. Yes. In the Texas Panhandle Field, but I can't tell you which one it was. We passed one one day and stopped to go through it. I think it was a plant owned by the Panhandle or a plant which processed gas which went to the Panhandle Eastern Pipe Line Company, but I couldn't tell you which one it was.

MR. McALLISTER: Maybe it was the Sneed plant.

THE WITNESS: No.

BY MR. SPARKS:

Q. Did you understand the plant was processing casing-head gas? A. Oh, casing-head gas. I beg your pardon. I do not know. I was referring to the processing of the so-called dry gas.

Q. Gas well gas? A. Yes, gas well gas. I think that plant was not a processing plant for removal of casing-head gas.

Q. In other words, as far as you can recollect, you have never been in a processing plant which was processing casing-head gas? A. Not as far as I can recall.

Q. And the only gasoline plant of any kind that you can recollect ever having been in is one plant in the Panhandle

[5684]

Field, is that right? A. I think that is true, too, yes, sir.

Q. How long ago was that? A. That was about 1940.

Q. You don't recollect— A. (Interrupting.) I'm sure it was 1940, because we were in that area in 1940.

Q. And you think that was a plant of Panhandle Eastern's in the Panhandle Field? A. I think it was, or a plant from which Panhandle Eastern obtained or took the gas. However, I'm not certain of that either. That is my impression, and, of course, I don't see really what difference that would make whether it was Panhandle or someone else.

* * *

[5691]

MELWOOD W. VAN SCOYOC

resumed the stand, and having been previously duly sworn, was examined and testified further as follows:

PRESIDING EXAMINER: Counsel for the respondent may cross-examine the witness.

Cross-Examination by Mr. Sparks

Q. Mr. Van Scoyoc, you testified yesterday, I believe, that 54 companies who were classified by the Commission as "A" and "B" companies and who made reports to the Federal Power Commission as Natural gas companies were producers of gas, did you not, from the wells that they owned? A. I did, sir.

Q. And that of those 54 companies, you testified that 17 produced gas in a seven-state area in the southwest which was composed of Texas, New Mexico, Arkansas, Louisiana, Mississippi, Oklahoma and Kansas, is that right? A. That is correct.

Q. You also testified that the 54 companies owned and operated some 30,162 gas wells, is that right? A. That is right.

[5692]

Q. As of what date were your figures on that— A. (Interrupting) That was reported as of December 31, 1949.

Q. How many of those 30,162 gas wells are owned by the 17 companies which produce gas in the seven-state southwest area? A. I don't have them added up, but I can give them to you by companies.

Q. If you will, just identify the company and the number of wells, but first let me ask you this question, will your answer include all the wells of those 17 companies or only those wells of the 17 companies which are located in the seven-state southwestern area? A. It will include only the wells of those companies which are located within the seven states. I can give them to you by states if

you want them that way or a total for the company.

Q. Give them by states. A. Arkansas-Oklahoma Gas Company, 96 wells in Arkansas, 29 in Oklahoma.

Hope Producing Company, 39 wells in Louisiana.

Kansas-Colorado Gas Company, 4 wells in Kansas.

Southern Natural Gas Company, 26 wells in Louisiana.

Southern Union Gas Company, 4 wells in Texas, 5 wells in New Mexico.

Texas Gas Utilities Company, 3 wells in Texas.

Union Gas System, Inc., 78 wells in Kansas, 58 wells in

[5693]

Oklahoma.

Interstate Natural Gas Company, Inc. 233 wells in Louisiana.

Panhandle Eastern Pipe Line Company, 174 wells in Kansas, 32 wells in Oklahoma, and 69 wells in Texas.

Texoma Natural Gas Company, 231 wells in Texas.

Canadian River Gas Company, 202 wells in Texas.

Kansas-Nebraska Natural Gas Company, 18 wells in Texas.

El Paso Natural Gas Company, 24 wells in New Mexico.

Cities Service Gas Company, 6 wells in Kansas, 153 wells in Oklahoma, 145 wells in Texas.

Arkansas-Louisiana Gas Company, 14 wells in Arkansas, 57 wells in Louisiana, 84 wells in Texas.

Northern Natural Gas Company, 167 wells in Kansas, 36 wells in Texas.

Consolidated Gas Utilities Company, 4 wells in Kansas, 27 wells in Oklahoma, 53 wells in Texas.

That completes all of the gas wells for the 17 companies. There are several of those companies which also have oil wells.

* * *

[5697]

Q. State, if you know, the number of producers who own and produce gas wells, gas from which is sold to one or more of the companies reporting to the Federal Power Commission as natural gas companies, but which producers do not themselves report to the Federal Power Commission as natural gas companies?

MR. McALLISTER: May I have that question read?

PRESIDING EXAMINER: Read the question.

(The question was read by the reporter.)

MR. McALLISTER: I just want to be sure—

THE WITNESS (interrupting): I don't understand the question. I wonder if I might have that read again.

(The question was read again by the reporter.)

MR. McALLISTER: Do you mean people like Skelly or Magnolia, is that what you mean, Mr. Sparks?

MR. SPARKS: Yes, and Phillips.

MR. McALLISTER: Phillips?

MR. SPARKS: And how many hundred thousand others there may be. I am just asking if he knows how many there are:

THE WITNESS: There were some figures compiled, I believe, about 1946 or '47 which were compiled from reports to the Federal Power Commission by the natural gas companies reporting to the Commission, showing the total number of producers and gatherers in the category

which you named. I believe there were about 2,300 such producers of which about 600 were in the seven southwest states.

[5698]

BY MR. SPARKS:

Q. In that tabulation, if a gatherer purchased gas from other producers and gathered the gas and then sold it either before or after extracting the liquids to a company reporting to the Federal Power Commission as a natural gas company, would that count it as one gatherer and producer or in that tabulation did you count in all of the producers from whom the gatherer purchased? A. All that tabulation showed, as I recall it, was the names or the number of companies from which companies reporting to the Federal Power Commission purchased gas.

Q. Made direct purchases? A. And I don't think it would include people who might be selling to—well, take, for example, to make is specific, a company like American Gas Production Company, which might be selling gas to Phillips in the Texas-Hugoton field, and Phillips would then resell that gas to Michigan-Wisconsin Pipe Line Company. I don't believe it would include that category of companies because the reports of the Federal Power Commission would not ordinarily disclose that.

* * *

[5709]

Q. The report shows, does it not, that for the year 1947 and for all natural gas companies in the country there was purchased from independent producers and gatherers

57.94 per cent of the gas supply of all such natural gas companies? A. That is correct.

Q. And for the seven-state area of Arkansas, Louisiana, Kansas, Mississippi, New Mexico, Oklahoma and Texas, for the year 1947, that purchased from independent—it says independents, does that mean independent producers and gatherers? A. I believe that would mean the same thing.

Q. That purchase from independent producers and gatherers was 61.76 per cent of the total supply of said companies? A. That is correct.

Q. Then you also prepared an estimate of the percentage of the total supply of natural gas companies reporting as such to the Federal Power Commission which would be produced by said companies and affiliates and which would be purchased from independent producers for the year 1952, taking into account no pending certificate applications before the Commission with the exception of that of Tennessee Gas Transmission Company, in Docket G-962, isn't that right? A. You said you prepared. I didn't personally prepare the

[5710]

data, but it was prepared under my supervision and direction and I believe the figures are reasonable.

Q. And that estimate for all companies reporting as natural gas companies to the Federal Power Commission for the year 1952 reflects that 29.64 per cent of their total gas supply will be produced by said pipe line companies and their affiliates, is that right? A. That was the esti-

mate that was made at the time this was prepared in '47, I believe, or '48.

Q. And— A. (Interrupting) Based on applications which had been filed by natural gas companies covering projects and the purchase gas contracts which were a part of those applications, which applications had been granted with the single exception of the Tennessee application to which you referred, which was pending at that particular time and has subsequently been granted.

Q. And with regard to all companies reporting as natural gas companies the report reflects that 70.36 per cent of their total supply would be purchased from independent producers? A. That was the estimate, yes, sir.

Q. And with regard to the 22 interstate pipeline companies reporting as natural gas companies to the Commission in the seven-state area we have been talking about, the estimate was that 76.75 per cent of their total requirements would be purchased from independent producers, is that right?

[5711]

A. Yes, sir, that was the estimate.

* * *

[5726]

Q. I just want to know whether you are sufficiently familiar with the exhibit to answer this question. In the event Phillips Petroleum Company should be held to be a natural gas company and the sales made by Phillips Petroleum Company to any Interstate Pipe Line Companies, the delivery of which occurs in the counties of

Moore, Hartley, Sherman, Hansford, Texas, and Texas County, Oklahoma—

MR. SPARKS: I'd like to have the question read to that point.

PRESIDING EXAMINER: Read the question.

(Question read.)

BY MR. SPARKS:

Q. —are subject to rate determinations by the Federal Power Commission, and in the event that any of those sales prices as are contained in the sales contracts are ordered reduced by the Federal Power Commission, is it not a fact that royalty owners who receive royalties under this form of gas royalty agreement would be affected by such reductions in price and their royalties payable to them be reduced?

* * *

[5727]

PRESIDING EXAMINER: Do you understand it, Mr. Van Scoyoc?

THE WITNESS: Yes, I understand it. The answer would be no.

* * *

[5730]

Q. All right, how do you determine, Mr. Van Scoyoc, that any reduction in the sales price which might be ordered by the Federal Power Commission of any sales of Phillips Petroleum Company in this five county area, would not have any effect on the royalties to be received by the royalty owners under this agreement?

* * *

THE WITNESS: Well, the gas royalty agreement to which you referred, Exhibit 109, is a contract between Phillips Petroleum Company and the royalty owner, and it is subject to whatever agreement there may be between the parties, subject to modification and thousands of them have been modified as so testified in this proceeding, to change the basis of the royalty payment, and the mere fact that the Federal Power Commission might fix a price below the so-called weighted

[5731]

average price per Mcf received by lessee from all sales of gas, which is in Moore, Hartley, Sherman and Hansford Counties, Texas, and Texas County, Oklahoma, would have no bearing on it at all.

BY MR. SPARKS:

Q. It wouldn't have any bearing or relationship on this contract at all, you don't think so. A. No, sir. Phillips has modified all kinds of royalty payments. We fixed the rates of Panhandle, Cities Service, Northern Natural and as far as I know no royalty payment was affected by it.

Q. You don't know whether they had any such agreements as this, do you? A. I know they had agreements which are similar to this, yes, sir.

Q. You know they weren't similar to this, Mr. Van Scoyoc.

MR. McALLISTER: Mr. Examiner—

MR. PERDUE (interrupting): Here we go on arguing with the witness again.

PRESIDING EXAMINER: Yes, we have a lot of it.

Go ahead.

BY MR. SPARKS:

Q. You know those provisions provide for a flat rate in cents per thousand, don't you, Mr. Van Scoyoc?

[5732]

A. I think most of them did, yes sir.

Q. You know this agreement does— A. (Interrupting.) As a flat minimum. There are usually three types of royalty contracts generally. One is a flat rate per Mcf, some are a flat amount so much a year and some of them are based on some kind of a price in the field, weighted average or otherwise and Phillips has renegotiated a lot of its contracts probably from flat prices to weighted average price.

Q. Where have you reached the conclusion that Phillips has renegotiated a lot of its royalty contracts from flat rate to weighted average price, on what basis? A. (Interrupting.) I believe that was the testimony of Mr. Bunn, as I recall it.

* * *

[5733]

MR. SPARKS: I'll change the question to the extent that the leases of Phillips Petroleum Company contain provisions for payment under the provisions shown in Exhibits 108 and 108-A, do you find any flat rate royalty provisions on gas?

* * *

[5735]

THE WITNESS: Well, on Exhibit 108, which apparently was revised in 1943, I don't know whether it goes

back of that time or not, but paragraph 3, sub B, "royalty on gas, including casing-head gas or other gaseous substances produced from said lands and sold—I don't know whether that is on or at the wells—the royalties shall be 1/8 of the amount realized from such sales". No, wait a minute, I skipped a line.

BY MR. SPARKS:

Q. That is not a flat rate, is it?

MR. McALLISTER: Let the witness answer, if you will, please. You argue on the question, let him answer the question without arguing with him on his answering.

[5736]

THE WITNESS: There is too much fine print. It should be "or used off the premises or used in the manufacture of gasoline or other products, the market value at the well of 1/8 of the gas sold or used provided that on gas sold at the well the royalty shall be 1/8 of the amount realized from such sale" is that what you refer to?

BY MR. SPARKS:

Q. That is the royalty provision, yes. A. No, sir, as I see it, that would not be affected if the Commission were to fix the rates for the sale of gas by Phillips Petroleum Company to Panhandle Eastern at the Sneed plant or at the Hansford plant or to Michigan-Wisconsin at the Sherman plant or to El Paso Natural Gas Company at the Dumas Plant.

Q. My question to you was whether you found any flat rates provided for in that royalty provision? A. No, there is no flat rate in this particular contract.

Q. And you don't know of any contract, royalty contract, that Phillips has that has a flat rate, do you?

MR. McALLISTER: I object, Mr. Examiner. It is arguing with the witness.

PRESIDING EXAMINER: The objection is overruled.

THE WITNESS: At the present time I would have to examine all the royalty contracts to see whether that is a fact.

BY MR. SPARKS:

Q. Then you didn't have any basis for your statement—

[5737]

A. (Interrupting) Well, my basis was the testimony—

Q. (Interrupting) That Phillips had modified a great many of the flat rate contracts to some other basis? A. My basis was listening to the testimony of Mr. Bunn that all of those old contracts had been renegotiated or most of them.

Q. It is a fact, is it not, that unless agreements executed on this form by royalty owners were modified payments to such royalty owners pursuant to the provisions of contracts on this form. Exhibit 109, would be affected in the event of a reduction of the prices Phillips Petroleum Company would be permitted to receive from the sales of gas made to Michigan-Wisconsin Pipe Line Company at the Sherman plant, Panhandle Eastern Pipe Line Company at the Hansford plant and Sneed plant and El Paso Natural Gas Company at the Duman plant?

MR. McALLISTER: I object, Mr. Examiner. The witness has answered the question. Counsel is merely con-

tinuing to argue with the witness.

MR. TORKELSON: We object to it on the ground it requires the witness to give a legal conclusion and further that the question does not specify the various assumptions on which it is based and is defective in form.

PRESIDING EXAMINER: The objection is overruled.

[5738]

THE WITNESS: The payment under this contract is based on the, other than the minimum, is based on the weighted average price per Mcf received by lessee from all sales of gas delivered within the area comprising Hartley, Sherman and Hansford Counties, Texas, and Texas County, Oklahoma.

BY MR. SPARKS:

Q. And Moore County, Texas. I think you left it out.
A. Moore, yes, exceeds four cents during any calendar month. The royalty to the total volume of sweet gas so produced and so sold or used during the succeeding month shall be an amount equal to such weighted average price multiplied by 1/8th of the total volume in Mcf of such sweet gas and the royalty on the total amount of sour gas so produced and so sold or used during each succeeding month shall be an amount equal to such weighted average price less .4466 cents multiplied by 1/8th of the total volume in Mcf of such sour gas. I note from this particular provision which I read that this includes all sales and I assume from that that all sales made by Phillips Petroleum Company to all markets for all purposes in the Moore, Hartley, Sherman and Hansford County, Texas, and Texas County,

Oklahoma during a month are combined in some manner to ascertain a weighted average price, and the royalty payment to those particular royalty

[5739]

owners who have agreements under Exhibit 109 are based on that basis. I don't know whether it is weighted on an Mcf basis, but I assume that is the case.

Q. It is so specified if you search clear through the agreement. Just assume that. You wouldn't weight it on any other basis, would you? A. No, I think that would be a logical basis for weighting, if you were to come to a weighted average price. To whatever weight the sales by Phillips to Michigan-Wisconsin at the Sherman plant, Panhandle at the Hansford plant, Panhandle at the Sneed plant, and El Paso at the Dumas plant bore to the total sales of Phillips in that area the payment which Phillips is obligated to make under the agreement would be affected unless the agreement were modified. Now, to the extent of that modification—I don't mean modification—the extent to which the payment to a royalty owner would be affected by fixing, by the Commission fixing, the sales price, at any one or for any of those sales at a price less than which the gas is being sold at the present time, of course, depends on the weighting and the changes in the price, if any.

* * *

[5741]

Redirect Examination by Mr. McAllister

Q. Mr. Van Scoyoc, on cross-examination by Mr.

Sparks, reference was made to some 2,300 so-called independent producers, as shown by a report of the Federal Power Commission to a committee of Congress on the percentage of gas which those 2,300 independent producers supplied to purchasers who were natural gas companies, is that right? A. That is right.

Q. Now, I believe that report also shows the 35 largest so-called independent producers? A. It does.

Q. What percentage of the total is supplied by the 35 so-called independent producers? I mean of the total supplied by 2,300 so-called independent producers, what percentage is supplied by the 35 largest independent producers as they are called?

[5746]

A. Approximately 72 per cent.

BY MR. McALLISTER:

Q. And of those 35 so-called independent producers who are the largest, what company stands No. 1 in size?

A. Based on the volumes of sales for the seven-state area, in the year 1947, Phillips Petroleum Company is the largest in point of sales to interstate pipe lines.

Q. And on the basis of estimates for '52, which is the largest? A. Phillips Petroleum Company.

Q. Mr. Van Scoyoc, it is a fact, is it not, that El Paso Natural Gas Company gathers and processes casing-head gas in the Permian Basin? A. Yes, sir.

MR. SPARKS: I didn't hear the question.

PRESIDING EXAMINER: Read the question.

MR. McALLISTER: It is a fact that El Paso gathers

and processes casing-head gas in the Permian Basin.

BY MR. McALLISTER:

Q. Could you give us the name of the plants where that processing takes place? A. Processing takes place in Jal No. 1 plant in New Mexico and Jal No. 2 plant in New Mexico.

Q. What is the basis of that information? A. The report of El Paso to the Federal Power Commission

[5747]

and exhibits in this proceeding, 10-A and amendment thereto of 10-B and likewise I believe Exhibit 86, which shows the processing plants in the Permian Basin.

* * *

[5756]

MR. McALLISTER: I ask that there be incorporated in the record by reference to the files of the Commission the testimony of Mr. Don Emery, vice-president and general counsel of Phillips Petroleum Company given in Docket No. G-178 before a proceeding held by the Federal Power Commission in the State of Wisconsin, City of Madison, State Capitol, second floor, on Thursday, October 17, 1940, before Examiner Ewing G. Simpson, and I offer the testimony of Mr. Emery as contained on page 87, beginning at line 13 to and including page 90, line 12; pages 124, line 19 to and including page 128, line 8; page 214, beginning at line 19, to and including page 219, line 17; page 223, line 10, to and including page 224, line 8.

MR. SPARKS: 8?

MR. McALLISTER: 8. Also the testimony of Stanley Learned—

PRESIDING EXAMINER (interrupting): Well, the testimony of Mr. Emery will be identified for the purposes of this record as

[5757]

Item M by reference.

* * *

MR. McALLISTER: I wanted to be accommodating and I'll be glad to do it. The testimony of Mr. Stanley Learned begins on page 772 at line 2, and the part which I ask be incorporated by reference includes that testimony from the point I have specified to and including line 160 on page 779.

PRESIDING EXAMINER: The testimony of Mr. Stanley Learned will be identified for the purposes of this record as Item N by reference. As I understand it, that is in the same proceeding, is it?

MR. TORKELSON: Who is Mr. Stanley Learned?

MR. McALLISTER: He testified at that time that he was chief engineer of the Phillips Petroleum Company, and that he had charge of all construction work, including natural gas field lines, transmission lines, plants, oil lines, I mean crude oil,

[5758]

and gasoline lines and what-not.

* * *

[5759]

MR. McALLISTER: It is in rebuttal of the proposition that Phillips Petroleum Company never had anything that was called by the name of a transmission line, that they only had gathering lines, as stated by Mr. Bunn, that they never had anything since he was with the company back in 1921, and Mr. Don Emery, testifying before the Federal Power Commission, and I'm going to read one paragraph as better stating what the import of his testimony is than I could possibly state it:

"The construction of gas transmission lines ranging from 15 to 50 miles in length is just ordinary course all the time. I will say that that has occurred and they have been laying and taking up lines of that size for the last 15 years in that department, and then that comprises transmission lines of several kinds. It is not quite correct to describe it just as gathering lines from wells, for instance, referring to Exhibit 7, part 1, there is a 50-mile transmission line just constructed within the last four years from a point in Moore County, Texas, to a point in Hutchinson County, Texas. Well, there are two gas transmission lines extended there and those transmission lines transmit gas after gathering in the field anywhere for a distance of maybe 30 feet to five miles" and those statements of that kind showing what he had to say regarding the lines which Phillips had in the fields in those counties, which is the same fields and counties

[5760]

we have here under consideration with respect to the counties and fields where gas produced is assembled, processed

and sold to the major pipe lines which we have under consideration. It is documentary evidence in direct contravention of what Mr. Bunn said, and it is offered for that purpose.

Mr. Learned, who is chief engineer—you know, Mr. Don Emery was a lawyer, but he qualifies himself very thoroughly and I have included all his qualifications as he stated them under oath in this proceeding before the Federal Power Commission, but he had with him Mr. Stanley Learned the chief engineer of the company who backed him up, and it is for that reason that the testimony of Mr. Learned is offered. I want to point to one part of that. He says "we have built in excess of 1,100 miles of crude oil pipe lines, ranging generally in size in both 6 and 8 inch, some of it larger, some of it smaller, but the bulk of it in those sizes and we have built in excess of 4,000 miles of gas lines. Do you mean natural gas pipe lines. Natural gas pipe lines, they 'vary in size from 24 and 26-inch down.' This question, 'are they used both for gathering and transmission?' Answer: 'That is right.' "

* * *

[5773]

MR. TORKELSON: Mr. Examiner, the State of Wisconsin and the Public Service Commission of Wisconsin adopt as its exhibits Exhibits marked 3 to 7, inclusive, and we offer them in evidence.

MR. SPARKS: Those have been excluded, have they not? I mean as offered by the staff.

PRESIDING EXAMINER: Yes.

MR. SPARKS: I make the same objections to the exhibits that were made at the time they were offered by the staff.

PRESIDING EXAMINER: The objections to Exhibits 3 to 7, inclusive, are sustained.

MR. TORKELSON: The State of Wisconsin and the Public Service Commission of Wisconsin request that the exhibits stand in the record as and for our offer of proof under the rule.

PRESIDING EXAMINER: They will be so considered.

MR. TORKELSON: The state and the Wisconsin Commission also move that there be incorporated into the record by reference Exhibit 53. I misspoke there. We desire to offer

[5774]

into evidence Exhibit 53 and have incorporated into the record by reference the material already identified as an Item E. The latter is certain testimony of Ralph E. Davis in the matter before the Federal Power Commission in the Michigan-Wisconsin Pipe Line Company and Michigan Consolidated Gas Company, Docket G-1146.

PRESIDING EXAMINER: 1146, is it?

MR. TORKELSON: G-1146.

PRESIDING EXAMINER: 1156, isn't it?

MR. TORKELSON: Is it 56? Then I have the wrong number here.

PRESIDING EXAMINER: I have a note here. My note shows 1156.

MR. TORKELSON: That is right.

MR. SPARKS: Is this the same—

MR. TORKELSON: Just let me finish. It is the same, yes. The pages from the record in Docket G-1156 which we desire to have incorporated into this record and which already has been identified as Item E in this record appear at Page 3994 of Volume 29 of the record in this instant proceeding. This, again, is material which has been offered by the staff, but we desire to offer it on behalf of the State of Wisconsin and the Public Service Commission of Wisconsin.

MR. SPARKS: Offered and excluded, was it not?

MR. TORKELSON: Yes.

[5775]

MR. SPARKS: Rather than restating my objections, I make the same objections to Exhibits 53 and Item E by reference which were made at the time of the offer by the staff.

PRESIDING EXAMINER: The objection to Exhibit No. 53 as now offered by Wisconsin is sustained.

The objection to Item E by reference as now offered by Wisconsin is also sustained.

MR. TORKELSON: May the record show that we make an offer of proof and request that the document marked as Exhibit 53 stand in the record as and for our offer of proof and that the material incorporated or referred to as Item E be placed in the record as and for our offer of proof?

PRESIDING EXAMINER: Yes, those items will be treated as an offer of proof on behalf of Wisconsin.

MR. TORKELSON: In the past we have, in making objections and making offers of evidence, used the term "we offer" or "we object", and I wish the record to show that whenever that term is used, the term "we" refers both to the State of Wisconsin and the Public Service Commission of Wisconsin.

PRESIDING EXAMINER: Yes, and the record should also show that the ruling with respect to those motions, objections and so forth also is applicable to both of those parties.

MR. TORKELSON: Yes, sir.

[5776]

MR. McALLISTER: It is true, is it not, that during all of this hearing the State of Wisconsin and the Public Service Commission of Wisconsin have been represented by the same counsel?

MR. TORKELSON: That is correct.

MR. SPARKS: What was the question?

PRESIDING EXAMINER: Read the question.

MR. McALLISTER: They were represented by the same counsel, the State of Wisconsin and the Wisconsin Public Service Commission. I mean I merely make that statement to be sure that where "we" was used it was by an individual who was here representing both of them. If I use that term it doesn't mean I am speaking for—

MR. SPARKS (interrupting): I am willing to concede if the counsel uses the word "I", it applies to both of them.

MR. McALLISTER: That is, counsel representing the two parties.

MR. SPARKS: That is right.

MR. McALLISTER: I am willing to agree to that.

MR. TORKELSON: That is all I have.

* * *

[5788]

PRESIDING EXAMINER:

* * *

The objection to Items M and N are overruled, and those

[5789]

items are received in evidence by reference to the files of the Commission.

* * *

[5795]

MR. McALLISTER: We have one other matter, Mr. Examiner, that you brought up this morning, and that was respect to the matter of the City of Detroit, and I'm only undertaking now to work out some solution because I have been requested to do so by the Examiner.

There is included with the letter of Mr. Lee addressed to the Examiner under date of May 16, 1951, a tabulation which shows the volumes of sales by Michigan Consolidated Gas Company, Detroit District, to the City of Detroit. That statement shows the Mcf as billed in 1950 by some twenty departments of the City of Detroit and the statement only shows sales in Mcf. I don't have such copies, but I would like to have it copied in the record at this time, if you have no objection, Mr. Sparks.

PRESIDING EXAMINER: Is there any objection?

MR. SPARKS: I have no objection.

PRESIDING EXAMINER: That will be done.

MICHIGAN CONSOLIDATED GAS COMPANY

Detroit District

City of Detroit Accounts.

Consumption in MCF as Billed 1950

<u>Department</u>	<u>MCF</u>
Board of Education	21591.6
Fire Department	5822.0
[5796]	
Public Library	5335.4
Corporation Counsel	820.7
Police Department	6514.2
Public Works	3379.9
D. S. R.	3206.1
Water Board	1557.4
Parks and Recreation	1088.9
Public Welfare Department	2036.3
Department of Health	3162.5
Election Commission	413.0
Lighting Commission	25.8

Historical Commission	865.6
Art Institute	118.1
Weights and Measures	454.6
Memorial Hall Commission	5.7
Hospitals	1230.0
Safety Engineering	25.1
Traffic Engineering	731.8
Total	58,384.7

MR. McALLISTER: Mr. Lee also sent four bills, I presume, to show that the City of Detroit paid its bills, and it shows that—

PRESIDING EXAMINER (interrupting): One of them required some correction, too, didn't it?

[5797]

MR. McALLISTER: I noted that on there. I suppose it was an error in metering, you know. At least, they seem to have adjusted their differences.

[5798]

One bill is a bill paid in April, as near as I can figure out, for the month of March 1951. It is a bill for which it appears that the police department was responsible at their various locations and it totals for that billing period \$756.80.

For the same billing period there is one from the water department for \$157.22.

For the same billing period there was a payment of \$272.63 for the fire commission fund. That is the one that was corrected.

And then there is a third one from the public health, \$99.21 for the same billing period.

The total of those bills was \$1,286.86.

MR. SPARKS: I didn't hear you state what the billing period was there.

MR. McALLISTER: The March billing period, as near as I can figure it out. They were paid in April but it was apparently for—I don't know the beginning or the end of the billing period, but they were all paid in April 1951, and I am merely assuming that they were for the current period immediately before then.

MR. SPARKS: April 1951?

MR. McALLISTER: Yes.

MR. SPARKS: Then they don't relate at all to the period covered by the letter, then.

MR. McALLISTER: No. At least they paid their bills in 1951 if they didn't in 1950.

I think Mr. Sparks is willing to stipulate that the gas sold

[5799]

and distributed by the Michigan Consolidated in Detroit is supplied in substantial part by Michigan-Wisconsin Pipe Line Company. There are a number of statements here that undertake—

PRESIDING EXAMINER (interrupting): Will counsel stipulate as to that?

MR. SPARKS: To the statement made by Mr. McAllister, yes.

PRESIDING EXAMINER: Yes. That is, that a substantial—

MR. SPARKS (interrupting): I don't see any necessity for going into all the detailed volumetric figures that are included in that statement.

PRESIDING EXAMINER: No, I don't think so either. I think the purpose is to show that the City of Detroit has a substantial interest in the outcome of any rate proceeding.

MR. SPARKS: I don't know how substantial it is, but at any rate it shows they do receive or buy some gas from this distributing company.

* * *